



"Safety-Our Responsibility"
Safe community in Kvam



Application for accreditation as a Safe Community
in The World Health Organization's network of

"Safe Communities":

Kvam Municipality hereby applies for the status of a "safe community" in the World Health Organization's concept of the "safe community", and as a member of the Safe Communities Network.

Kvam December 2004

Mayor of Kvam Municipality

Steering Committee Leader

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1. Background for the project

1.1. “Safety-Our Responsibility” in Ålvik, Norway

In 1996, a project called “Safety—Our Responsibility” was started in Ålvik in Kvam municipality, Norway. Initiative for the project came from three sources; the oil companies Amoco and Norwegian Conoco, and the Norwegian Institute of Public Health. The intention was to use the profits from a royalty fund for injury prevention work in a commercial enterprise, taking the employee’s life-situation, as a whole, into consideration. Bjølvefossen is a smelting plant in the Elkem Corporation, which had, in the 1990s, worked actively to improve the working environments of its employees, as well as security in the work place. There were, at this time, approximately 250 people employed at the company. They were interested in the project in order to establish participation-based leadership, with the 24-hour person as a foundation. Kvam Municipality eventually became involved in the project, as it saw the potential for developing the municipality into a “Safe Community”.

The initial goals of the project had to do with preventing accidents involving Bjølvefossen employees, not only at the work place, but also at home and during their leisure time activities. A large majority of these employees lived in the industrial town of Ålvik. Later, the project was expanded to include the entire population of the town.

The following initiatives were carried out during the project:

Initiatives focused on work related accidents, at the work place:

- Safety Inspection Action, undertaken by Employees
- Information about Amoco and Conoco’s work with regards to safety.
- Departmental processing of employee reported near-accidents and dangerous situations.
- Occupational health, hygiene and safety items to employees, new and more stringent requirements installed.
- ”Benchmarking”--comparisons to Hydro Aluminum in Karmøy, Norway

Initiatives focused on home and leisure time accidents, involving employees and their families:

- Family safety day ‘96. All employees and their families were invited to the workplace (300 participated). The topics for the day were: fire safety, traffic safety, electrical installation safety, first aid, and first aid for poisoning.
- Distribution of a Safety Handbook, for avoiding accidents in the home and during leisure activity, to all employees.
- Pre-Christmas meeting ‘96, with focus on safety. Topics were: fire safety and sledding/skiing accidents prevention.
- Christmas gifts to employees ‘96 and ‘97; safety related.
- Safety equipment available, for sale, to employees; i.e. fire safety equipment.
- Safety equipment available, for loan, to employees; i.e. child safety equipment for the automobile.
- T-shirts with the project’s logo were given out.
- Grill party in June of 1997 with themes of boat and water safety.
- Printed information in the form of readily available brochures and leaflets about Occupational health, hygiene and safety items.
- Free batteries for smoke detectors (yearly).

Initiatives focused on accidents in Ålvik proper:

- Information about the project in the local newspaper.
- Logo competition in the local school.
- Check list about accident dangers at home distributed to all residents in Ålvik
- System for reporting dangerous situations in Ålvik (traffic related, etc.)
- Availability of child safety equipment and life vests for loan to town's citizens.
- Bicycle action: safety check of bicycle at school, buttons for the youngest who walked to school.
- Free bicycle helmet to all school children in third grade.
- Free reflective vests to students in 1st and 2nd grades.
- Social gathering for retirees in Ålvik, with themes regarding special safety concerns for the elderly.
- Information about accident prevention in the school and day care center.

Johan Lund evaluated the project and his report had the following conclusions:

”The project has most likely reached its goal of reducing the risk of work-related accidents for the employees of Bjølvfossen. H- and F-numbers (H- and F- ratio) have been reduced by 65% in three years, a far greater reduction than the average reduction of approx. 25% in all the smelting plants in SIM's statistics for the same period (Metallurgical industry's secretary) It is also probable that the risk of accidents, at home and during leisure time, for Ålvik's population has been reduced because dangerous situations, both at home and in surrounding environments, have been improved. In comparison to similar studies of oil-industry workers in the North Sea and at refineries, it would appear that Ålvik's population has not improved its behavior with regards to safety and accident preparedness after the two-to-three years the project was in effect. It is possible that a more long-ranged and more diversified influence is necessary to change the population's behavior. The company's employees were positive to the company's attempts to influence the individual's safety behavior at home and during leisure time, and they actively participated in accident preventative activities. The project has established good cooperation between the company, its employees, the local community and the municipality. This will act as a solid foundation for the possibility of further work to effectively reduce the danger of accidents involving Ålvik's population.

The company that carried out the project was motivated, and had an enthusiastic company leader. The company's intention was to expand its work regarding safety concerns. By taking into consideration the employee's safety at home and during leisure time, the company aimed at improving its own safety standards. This evaluation interprets the results of the project to indicate that this model has given positive results.”

1.2. National goals

The national government's “Plan of action for the prevention of accidents in the home, at school and during leisure time, 1997 – 2002” requires that municipalities work systematically and cross-departmentally, with regards to prevention of accidents. The goals of the Plan include:

- Reduction of the number of deaths caused by accidents, by a minimum of 25% during the period 1980 – 2000
- Reduction of accidents requiring hospitalization and treatment by a doctor, by a minimum 10% during the period 1993 - 2000

- 10% of municipalities shall function according to the criteria for “Safe Communities”.

Financial provisions were made to support this work.

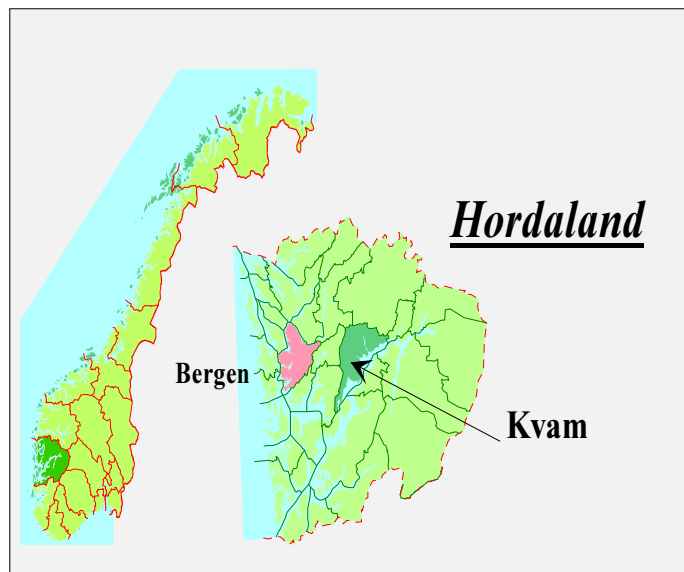
Based upon these national goals and the positive experiences harvested from the work done in Ålvik, Kvam’s Municipal Council decided, on September 28, 1999, to continue working in this direction, and that the project would be expanded to encompass the entire municipality. The aim was to achieve accreditation as a “Safe Community” according to WHO’s “Safe Community”-concept, through the fulfillment of a three year project. A project leader was hired in 2000, to run the accident prevention program in the municipality. Because of new tasks required of this project leader, in addition to ”Safety—Our Responsibility”, the time frame for the project was extended, and as of September 2003, a new part-time project leader was engaged.

In Kvam’s Municipality Plan for 2002-2014 there is the expressed goal to obtain accreditation as a “Safe Community” under the WHO program.

1.3. Kvam Municipality

1.3.1. Geography

Kvam municipality lies on the northern shore of Hardanger fjord, and is a medium sized, mostly rural municipality in Hordaland County, with approx. 8500 inhabitants. It is a fjord and mountain municipality with a total area of 615.8 km², and having over 200 km. of coastline. The municipality is approximately 80 km long, stretching from Oma in the south to Ålvik in the north. Population is most dense along the fjord. One third of the total area lies below 300 m above sea level, one half lies below 600 m above sea level, and the highest peaks are approx. 1300 m above sea level. The municipality’s network of roads includes approx. 100 km of national roads and 120 km of county and municipal roads.



Norheimsund is the administrative center. Kvam is working to develop a quality control system for activity in all of its departments. Health improvement, with injury prevention, is just one area of focus.

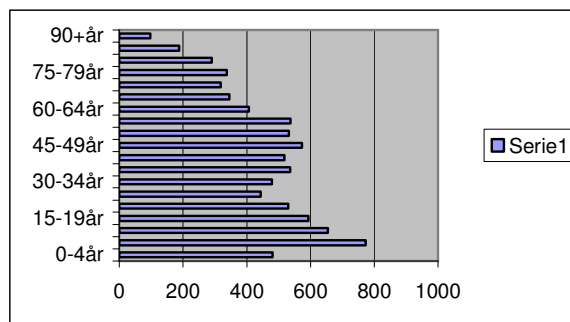
1.3.2. Population

There were approx. 8500 residents in Kvam municipality at the turn of the year 2003 -2004. The largest number of these live in the Norheimsund / Øystese area (approx. 5600 or 65%). Norheimsund has 3300 residents, Øystese approx. 2300, Ålvik approx. 740 and Strandebarm approx. 1600. The trend in the last decade has seen a movement of the municipality’s population towards the largest population centers. There are two asylum centers in Kvam, and the municipality also offers residence to refugees.

	Tal% andel av personarbefolkninga i 2004	
0-4år	480	5,65
5-9år	773	9,54
10-14år	654	7,35
15-19år	593	6,87
20-24år	530	6,21
25-29år	443	5,24
30-34år	478	5,60
35-39år	536	6,03
40-44år	518	6,28
45-49år	573	6,41
50-54år	532	6,12
55-59år	537	6,04
60-64år	407	4,53
65-69år	345	3,75
70-74år	318	3,89
75-79år	337	3,93
80-84år	290	3,29
85-89år	188	2,16
90+år	97	1,11

The census in Kvam shows a reduction of approx. 5% in the period from 1970-1999, probably due to lack of growth in the employment sector of the municipality. The prognoses for these numbers do not appear positive in the near future without special action taken, and indicates that the age group from 50 and up will markedly increase, while the number of residents in the age group of 0-19, will decrease.

Distribution of the differing age groups is shown, percent- wise, in the figure to the left.

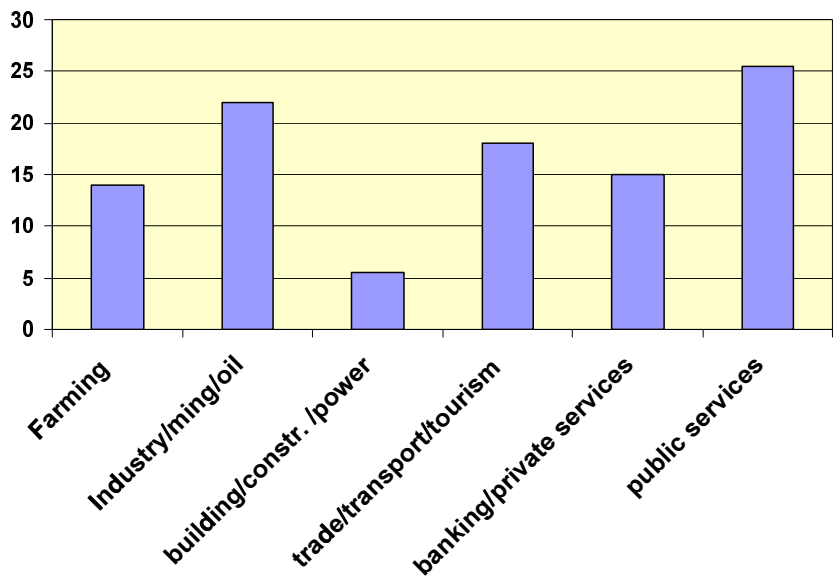


1.3.3. Business sector

The business sector is varied and includes:

- Mechanical production (Lid Iron industry, Hamek, Norheimsund Welding og Industry Service, etc.)
- Ship and Boat building (Fjellstrand, Hardanger Ships Preservation Center, Djupevåg, etc)
- Furniture industry (Kleppe, Torpe, Rybo Nor, etc.)
- Smelting plant: Bjølvefossen with its ferroalloy-industry in Ålvik is the largest private employer in the municipality (approx. 250 employees).
- Fish farming and hatching (approx. 80 man-labor years) is a growth industry.
- Tourism

Kvam municipality is the largest employer with a total nearing 600 man-labor years.



Farming makes up 14%, industry, mining, oil 22%, building, construction, power supply 5,5%, trade, transport, hotel/tourism 18%, banking/private services 15%, public services 25,5%.

The municipality has a well developed health care system including:

- 4 nursing homes/homes for the elderly
- Home-health services, divided into 4 zones
- Several health clinics, with a total of 8 physician positions in the municipal health services.

Schools:

There are 11 primary/elementary schools in Kvam, the majority of which are two or three-roomed schools. There are 4 middle schools/junior highs, and 3 high schools: Øystese Senior High School, Norheimsund Technical College and Framnes Christian Secondary School (with dormitory facilities).

Club activity:

In the municipality there are approx. 300 clubs and organizations. This indicates a good deal of enthusiasm for non-paid activity and community spirit, and that these organizations are an important part of the social structure of the municipality.

2. Goals for the "Safe Community" project, Kvam

When the Municipal Council made the resolution to begin the work involved in becoming accredited as a "Safe Community", they set up the following goals:

2.1. Goals

Vision: Kvam – a good and safe municipality to live in, work in and travel through, where everyone takes responsibility for his, or her, attitudes and behavior.

Fundamental goal: To make Kvam Municipality into a safe community in which to live.

Main goal: Reduce accidents in Kvam Municipality.

These goals have become part of the overall Municipal Plan for 2002 – 2014.

2.2. Strategy

The project has been set up to achieve these goals through the following initiatives:

- Develop plans for action (Traffic Safety Plan, Health Preparedness Plan, Crisis Preparedness Plan and other municipal planning tools)
- Include preventative measures in all planning work in the municipality, and develop a "safety" thought process in all work under the direction of the municipality.
- Work with information, motivation, and education for chosen target groups, as well as for the general population.
- Register injuries at the local emergency wards.
- Use the logo "Safety—Our Responsibility" to reinforce that each individual has his/her own responsibility.
- Present the injury preventative work in such a way that it is interesting and positively experienced by the general public. The number of accidental injuries should not be reduced because the average person becomes less active, but through the development of a "safe-thinking" culture, where competence is important. Activity would be considered a means by which accident numbers could actually be reduced; more activity giving increased competence and better physical condition, both leading to fewer accidents. Competence and physical condition are also important factors affecting the seriousness of an injury and how it will affect the individual.

3. Criteria for a "Safe Community":

The World Health Organization has, through its international program "Safe Communities", created a model for injury prevention on the local level. This is also a part of the injury preventative work done in Norway, and involves local administration and cross-sectorial cooperation.

Criteria for the program have been summed up into six areas:

Safe Communities have:

1. An infrastructure based on partnership and collaborations, governed by a cross-sectional group that is responsible for safety promotion in their community;
2. Long-term, sustainable programs covering both genders and all ages, environments, and situations;
3. Programs that target high-risk groups and environments, and programs that promote safety for all vulnerable groups;
4. Programs that document the frequency and causes of injuries;
5. Evaluation measures to assess their programs, processes and the effects of

- change;
6. Ongoing participation in national and international “Safe Communities” networks.

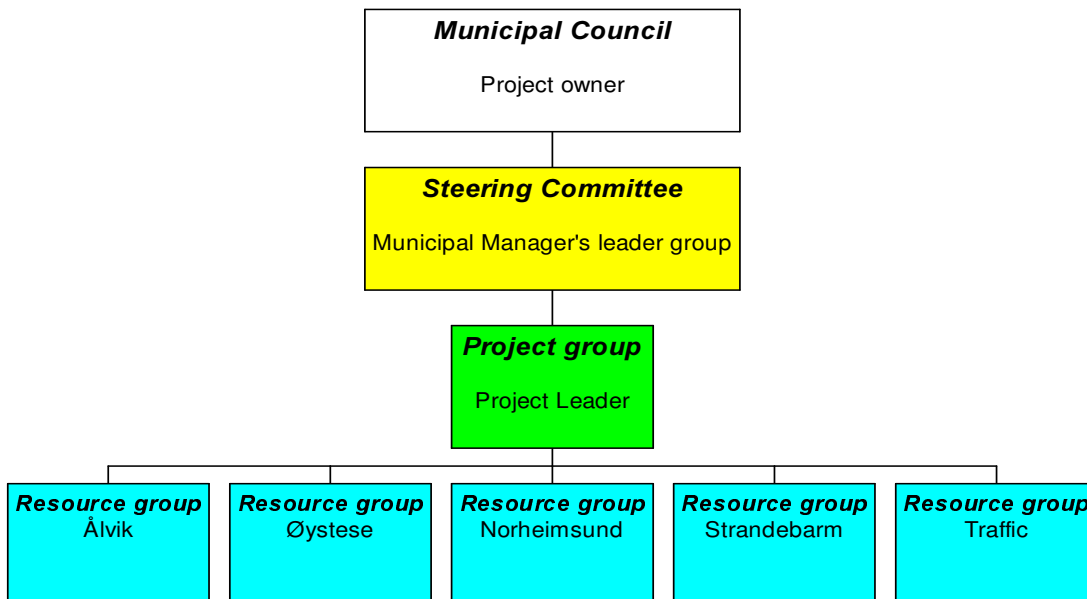
On the basis of earlier work in the municipality, and the resolution made by the Municipal Council in September of 1999, it has been decided to work following the above criteria, in Kvam, and to actively seek accreditation as a “Safe Community” under the guidelines from WHO. Measures set in motion to meet these criteria are listed below, showing Kvam municipality’s commitment in this area.

3.1. An infrastructure based on partnership and collaborations, governed by a cross-sectional group that is responsible for safety promotion in their community;

3.1.1. Project management

The Project has always been firmly tied to the leadership of the municipality by political resolutions confirming commitment to injury prevention. The steering committee for the project has been, and continues to be, the municipal leadership, with the Municipal Manager in the fore.

During the project period, a diversely constructed project group has acted to support the Project Leader in the project’s development. This project group is made up of: the Chief Municipal Medical Officer, the Chief Law Enforcement Officer, the Municipal Planner, the Managing Engineer, and representatives from the schools (principals), the business sector (Bjølvfossen smelting plant), sports, the volunteer center, and both the Youth Council and the Council for the Elderly.



3.1.2. Anchoring the project at the local level

To insure that the project was well anchored at the grassroots level, five resource groups were established. Four of these represented different geographical areas of the municipality, and took into consideration local situations. These local groups were made up of representatives from a number of clubs and organizations, institutions, law enforcement officers, and the health sector. The groups’ main goal was to uncover local situations they experienced as potentially dangerous, and suggest solutions. Solid cooperation lies as the foundation for future plans and chosen areas of focus. The fifth group was a resource group specifically concerned with traffic safety situations.

3.1.3. Continuing the cross-sectorial work

As the project period is now over, a permanent cross-sectorial group (CSG) has been established to continue the process in an operational phase, using experiences gleaned during the project period. Inaugural meetings were held for the CSG, and it is now in operation (mars 2004). The group is still working to establish its parameters and is using local situations as a starting point. The appointed Project Leader will continue as secretary to the group, until further notice.

Structure of the cross-sectorial group:

<i>Work group</i>	<i>Extended group</i>	
Chief Municipal Medical Officer (leader) Fire Engineer or Chimney Sweep Police Representative Public Health Nurse Emergency Ward Representative Secretary	Municipal Caretaker Principal Plant Foreman (technical) Road Administration Emergency Ward Rep. Physiotherapist	SLT-rep Council for Elderly Rep. Youth Council Rep. Rep. Club/Organizations Rep. Business Sector

Cross-sectorial cooperation:

Involves: Department leader meetings in municipality, cooperation between The Public Works Department, The Norwegian Public Roads Administration and the Chief Law Enforcement Officer.

3.2. Long-term, sustainable programs covering both genders and all ages, environments, and situations;

Important general areas, for a long-term program, touching all inhabitants, are: road traffic, fire prevention, and injury prevention in school/day-care, at home and during leisure time. Furthermore, risk and vulnerability analysis in the municipality (so-called “ROS-analysis”) should continue. The work groups have prioritized the differing topics in different ways. In the project period, traffic safety received a great deal of attention.

3.2.1. Road Traffic

During the last part of the 1990s, Kvam Municipality had a relatively high number of injuries, with twice as many injuries per 1000 inhabitants, as the rest of Hordaland County. 51% of all traffic injuries occurred in the age group 15 –30 yrs. (95-99), and 27 % occurred in the age group 16-20 yrs. The majority of accidents took place during the part of the year with most daylight, and on weekends. The municipality has relatively poor road conditions with many single-laned stretches (no room for a dividing line in the road, and traffic in one direction

must stop to allow the other to pass). Yet, as a paradox, it seems that the majority of serious accidents occur on the parts of the road network where the traffic standards are best. From this, it would seem that the conditions determined by nature--narrow, curving roads and dark winters—are not the main cause for traffic accidents, but that the accidents are a result of poor judgment and/or attitudes of those using the roads. Attitude shaping initiatives are therefore seen as very important. A Traffic Safety Plan was developed for the municipality, for the period 2000 – 2004, and was utilized as an important document in the work to improve traffic safety.

3.2.1.1. Attitudes in Traffic

The drivers attitudes are crucial to avoiding accidents in traffic; how one behaves, how one thinks of other drivers, knowledge, understanding and driving proficiency. Initiatives are diverse and take place through different means: in the schools, day-care centers, and health clinics—directed at parents, through teachers and other municipal employees in cooperation with The Norwegian Public Roads Administration and Kvam's Chief Law enforcement Officer. Attitude shaping work is also tied to work being done on the national level. One example would be the campaign to get people to use their seat belts and to drive at speeds related to road conditions. The local newspaper has also been used in attitude shaping work. A column concerning "bicycling tips" was created, giving readers tips on how best the roadways could be shared, by all users, without causing dangerous situations, and related these tips to local situations.

3.2.1.2. Road improvement and maintenance

Road conditions in the municipality are variable and dependent upon its topography. Around some of the schools, and in the municipal centers, one can find sidewalks and bicycle paths, but these are otherwise lacking on the majority of the road network. Some stretches of road are considered so hazardous, that the youngest school children are given free transportation to school, and that the somewhat older children receive the same offer during the winter months. This problem is prioritized in the municipality's Traffic Safety Plan, but improvements will be costly, and are dependent upon political decisions made outside of the municipality's area of authority, to be carried out.

- Improving the Municipal Center in Norheimsund. During the course of 2003 the center of Norheimsund was made more efficient and beautified. The improvements were made as a cooperative effort between the municipality and 'Norsk Form', an organisation working for design, architecture and development of towns and villages.

The roadways were narrowed to force drivers to reduce their speed through the center of town. Parking spaces were altered so as to deter diagonal parking at the curb, where drivers would then have to back into oncoming traffic to leave. It is also no longer possible to park up on the sidewalks, forcing pedestrians out into the road. One dangerous intersection was changed to allow for a better view of oncoming traffic. No accidents have since been registered at this intersection.

Visibility upgrading. Changing use of the landscape, changed/reduced agricultural operations, private hedges and other decorative vegetation, are all a part of increasing visibility problems along municipal roads and intersections. Kvam Municipality and The Norwegian Public Roads Administration have worked actively together, to define which areas each have responsibility for, in keeping the vegetation low enough to insure proper visibility at intersections. All residents have received information concerning things to consider when planting along roads and the clipping of hedges. In accordance with this, notification of dangerous situations has also played an important role in the follow up of quality control regarding visibility along roads in Kvam (see 3.2.2 below).

3.2.2. Notification of dangerous situations:

One link in the work involving “Safe Communities” had been notification of dangerous situations. During the first round, the Resource Groups had the job of listing all the various types of dangerous situations they thought had significance, for the public arena, in their local environments. This has then been opened to the rest of the municipality’s population, where an individual can report dangerous situations by telephone or by sending an e-mail to Kvam’s Internet home page. So far, 116 situations have been reported and 62 of them improved. A majority of the reports concern traffic. Situations that can be considered a part of their normal operations (i.e. removal of vegetation, repair of railings, etc.), are taken care of by the Public Works Department or The Norwegian Public Roads Administration. Otherwise, the appropriate departments will handle the reported situations. Other initiatives involving traffic, and requiring large investments, will be taken into consideration on the next round of the Traffic Safety Plan.

3.2.3. Accidents in the Home.

Nationwide statistics show that over 30% of all injuries occur at home. The statistics regarding accidents registered by the emergency wards in Kvam, show that 44% took place in the home. Focusing attention on potentially dangerous circumstances in the home, is important for maintaining awareness regarding safety at home. This includes the correct use of tools, solid hand rails along stairs, responsible storage of dangerous cleaning fluids and poisons, and the careful use of electrical equipment, etc.

With the cooperation of the school in Ålvik, a “home study” was executed. The students went through their homes (or Grandparents’ home) checking for dangerous situations, and filled out a questionnaire. This taught the children to see the possibilities for dangerous situations at home, and gave the parents an indication of things that should be corrected. Results from the “research” were used to give feedback to the homes and were published in the local newspaper. Looking at the results from year to year is one way to see changes in the attitudes of homeowners. In one study, it was noted that a stovetop was used to warm a room, while later studies indicated this was no longer the case. This initiative will be continued in order to maintain awareness, regarding this issue, among the general public.

Furthermore, a permanent column in the local newspaper, written by the Chief Medical Officer or other health personnel, is planned, and will give a constant injection of information surrounding public health and injury prevention to the population.

The municipality is also considering expanding the Chimney Sweep’s duties to include informing homeowners of dangerous conditions when he/she inspects fireplaces, chimneys and wood burning stoves. Other municipalities have profited greatly by this measure.

Children and the elderly are two of the most important groups that injure themselves in the home, and often seriously so. Measures taken for these groups are discussed in chapters 3.2.6. and 3.3.3.

3.2.4. Sports and Outdoor Activity.

Kvam stretches from the fjord to high mountains, and offers almost unlimited possibilities for outdoor activity. There are many cabins used solely for leisure time activity in the municipality, and one area called Kvamskogen (Kvam’s forest) is one of the most important areas for the population of Bergen (approx. 235 000 inhabitants) to be in the great outdoors. Kvam also has an active sports milieu, with a total of 34 clubs running everything from football (soccer), on elite levels, to somewhat more humble paintball competitions.

Sports and outdoor activity are important for strengthening both the body and psyche and have a positive influence on public health. Activity helps to increase dexterity and the ability to do things, in the population. This in itself prevents injury. When an accident does occur, a well-trained body is more able to tolerate the stress the body incurs, and has a shorter recuperation time. Emergency ward statistics in Kvam show that 24%, of the total number of registered injuries, took place during, or involving, sporting or outdoor activity (the two are discussed together due to unclear boundaries between them during registration). This is the second most important arena for injury after accidents in the home. Injury occurs in both organized and unorganized activity.

In Kvam, all organized sport is collected under one cooperative body called, "Idrettsrådet"(Kvam Athletic Club), This "Athletic Club" works with injury prevention, and intends to develop a Plan of Action with common strategies to avoid injury. This will include both injuries one can receive during execution of one's sport, or during transport to/from an event. For example, with participation in a sporting event, planning would include enough travel time to arrive on time to the event, taking into consideration ferries and other public transportation. This is "attitude shaping" one must work with continually, and which the leaders of the various sports clubs should see as a positive goal.

Non-organized activities require that participants take responsibility for their own safety, and that Kvam works in an "attitude shaping" way to provide information and facilitation. Outdoor activity organizations such as Kvam Hiking Club and Øystese Hunting and Fishing Club (ØHFC) are quite vigilant when it comes to injury and accident prevention, and strive to inspire increased use of the great outdoors. ØHFC works with arranging/preparing for activities and encourages taking advantage of all the possibilities the municipality and its natural surroundings have to offer. Types of projects: Fishing pole Project. Fishing poles are given to local schools with instruction (a day of fishing) on how to use them. The project also includes teaching the use of other equipment involved with fishing, like knives and life vests, and teaching the importance of having the proper attitude in order to avoid injury to oneself and others. Everyone wishing to hunt must successfully complete a hunting test. When a new type of ammunition was required (change from lead to steel bullets) the ØHFC worked actively to increase knowledge of the new product and how it should be properly used. Outdoor activity organizations emphasize that a good deal of activity, especially out of doors, in combination with the use of proper equipment, is the best means of avoiding injury.

Kvam has two downhill ski centers in Kvamskogen, which are used by the local inhabitants, as well as visitors to the municipality. Approximately 100 injuries take place yearly at these centers. Many of those who are injured reside in Bergen, or other municipalities, and many of the injuries are not treated at the emergency wards in Kvam. They are, therefore, not recorded as part of the statistics in this report. The "Safety –Our Responsibility" Project, working with the cooperation of the students and faculty participating in the sports program of Framnes Christian Secondary School, developed "rules of behavior" (see attachment) for skiers on the slopes, in order to eliminate injuries caused by misunderstandings between them. These rules are posted at the centers, in a highly visible way, and are well used by the active skiers. The use of safety equipment, such as helmets and wrist supports, has been focused upon and their use is encouraged at the centers.

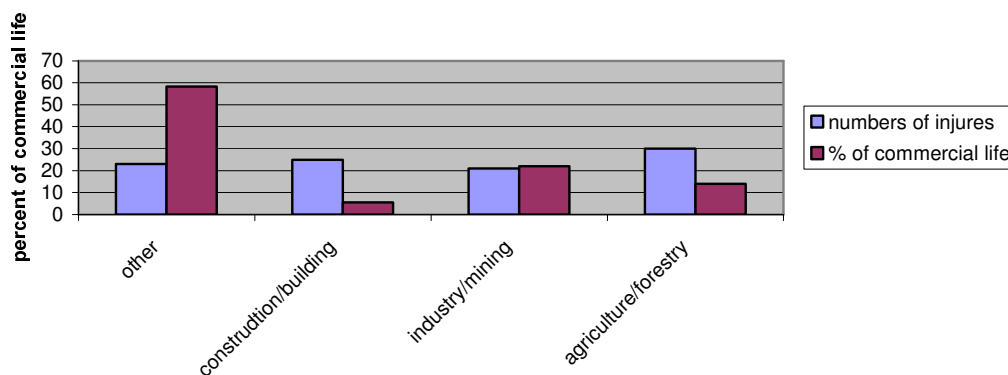
Boating is a popular and growing sport in the municipality. There are presently four boating organizations, all working to increase the use of boats, and of the sea, by making both more easily accessible. These organizations have boating safety as one of their goals and are involved in shaping positive attitudes while increasing knowledge surrounding the use of

boats. "Wooden Boat Days" is a large, yearly, maritime culture arrangement, and safety on the water has become a part of it, through demonstrations and other activities. In this way, a large audience is reached with the message. A local rescue boat, and Ålvik's Red Cross participate in this endeavor. Kvam hopes to continue with this, and get equipment sellers to include information to their customers that would encourage a thought process regarding the safe use of the equipment, and positive attitudes towards them. Ålvik's Red Cross has a rescue boat that can be sent out when an accident on the water first occurs.

3.2.5. Occupational related injures

There are laws to regulate the security of employees. All companies have the responsibility of insuring a safe working environment for their workers. According to Kvam's injury statistics, gathered from its emergency wards, agriculture/farming, construction/mining and industrial sites are those work places in Kvam with the highest number of injuries. These groups have the same frequency of injury as all the other workplaces in Kvam combined (registered by emergency wards). In relation to the number of man-labor years carried out, building and construction have the greatest incidence of injury occurring during paid employment. These injury statistics will be presented to employers as a challenge for improvement.

Portion of commercial life (percent), in relation to number of injuries registered by Kvam emergency wards, in the different commercial arenas



3.2.6. Emergency Preparedness

A municipal 'Emergency Preparedness Leadership Plan' has been developed and is practiced at least once a year. It is based upon thorough risk and vulnerability analysis (so-called "ROS-analysis").

Its main targets is:

- large traffic accidents
- landslides on roads and in residential areas
- pollution of the drinking water supply in the main centers of the municipality
- loss of electrical power in larger areas of the municipality

The 'Emergency Preparedness Leadership Plan' is developed as a system to alert the necessary personnel, and contains:

- crisis management

- available resources
- plans for different levels of gravity

In 2000 the Health Service in Kvam Municipality in cooperation with other institutions, made an information CD about the routines for when an accident happens.

3.3. Programs that target high-risk groups and environments, and programs that promote safety for all vulnerable groups;

Several groups in the municipality that are considered to be vulnerable are: children, young adults in traffic, groups of youths who fall outside of normal social structures, and the elderly.

3.3.1. Children:

Children make up one of the largest groups, most vulnerable to injury, in our society. The most important task is therefore to focus information and attitude shaping initiatives on the parents, as well as making safety equipment, and aids, available to them. Health clinics and public health nurses have a central role in this work. Information is given to new parents from the day their child is born. A public health nurse pays a visit to the mother and child shortly after they arrive home from the maternity ward. Subjects discussed include: the danger of accidents due to falling, choking, burns, poisoning, drowning, auto safety, etc. As the child grows, his/her parents receive further information systematically, at routine visits to the health clinic, explaining how their child's development can lead to new challenges and potentially dangerous situations. The health clinic can also inform parents about safety equipment and how one can obtain it. Some equipment can be borrowed or rented directly from the health clinic.

Day-care centers are required to have extensive safety routines for avoiding accidents, both involving their own facilities and equipment, and with regards to educating the children, in general. The day-care centers follow up this work by talking with the children and then practicing safe behavior. Topics: how one should behave in traffic, or if a fire should break out. The work is undertaken with the cooperation of the Fire Department and law enforcement personnel, and the subject matter is geared to the differing age groups being addressed.

Schools also have safety procedures to avoid the injury of students, as well as to avoid damage to materials and buildings. Throughout a student's educational career he/she is presented with traffic safety education designed for his/her level of understanding, and specific materials have been developed for this purpose through the "Safety—Our Responsibility" project. First graders are given reflective vests (sponsored by local businesses) at the start of school, often with the participation of a law enforcement official, and they receive training on how they should behave as pedestrians, on the roads to and from school. On roads considered particularly dangerous, the students are given free transportation to and from school during the winter months. The Norheimsund schools operate with student crossing guards in the morning, to eradicate dangerous situations in places where many students must cross a heavily trafficked intersection on the way to school.

Bicycling to school is allowed, but there are age limits and the schools require that all students wear helmets when they are on school grounds. Many schools go through bicycle safety checks with the students when the biking season resumes each spring.

First aid and life saving techniques are taught depending upon age level.

Fire drills are held each year throughout a student’s school career, and in day-care. They practice where they should report a fire and how, how to get out of the building and where they should go to await further instruction.

Bullying is an important topic discussed in Kvam’s schools. Øystese Elementary School put to use the “Olewus-program” aimed at ridding the school of bullying. The Educational Psychological Services Office in Kvam has instructors educated in the use of this methodology and who focus on this type of work. Other schools work with bullying using other means.

3.3.2. Older Children and Adolescents

Adolescence is a time of upheaval. The transition from childhood to adulthood brings with it great changes, both physically and mentally, to one’s spheres of movement and interest, to one’s capabilities, and to finding one’s place in society. This upheaval is shown through boundary testing, of both rules and one’s own abilities, and through the conquering of challenges in new arenas of interest. The age group comprised of 10-20 year-olds contained the largest number of injuries registered at the emergency wards. Increased physical prowess and the entrance into new milieu have also increased the consequences of an injury, in comparison with younger children. This is clearly illustrated in the injury statistics shown in the figure below (the number of injuries recorded in the period from October ‘02 to May ‘04): the number of injuries occurring at home is reduced for those in the age group 15-20 years, when compared to the frequency of those from 10-14, while the scope of arenas where injury takes place, outside of the home, broadens and becomes more important. Injury arenas such as the outdoors, sport, and school increase in significance, and in addition there is an increase in traffic accidents.



In school, injury prevention work builds upon the educational efforts started earlier. Attitudes and knowledge about traffic, first aid, as well as learning to ride mopeds/scooters in traffic, are all elective topics for secondary school students. Campaigns like “Speak Up!” (concerning driving too fast), directed by The Norwegian Public Roads Administration have been carried out.

In the municipality there is a wide range of activity for young people offered by both the municipality itself, as well as all the clubs and organizations found within it. There is an art and cultural school, many diverse sports teams, youth clubs, community work, etc. In these

arenas the goal is that the young people can develop themselves within a safe and reliable framework.

The municipality also has a Youth Council, which has also been involved with injury prevention work, through its participation in the cross-sectorial group.

3.3.3. Youths and traffic.

Statistics show that youths are especially vulnerable in traffic. The age group, 16-30 year-olds, is responsible for approx. 50% of all traffic accidents in Kvam (1994-1998). One of the reasons for this is that young drivers lack experience behind the wheel. This makes it difficult for them to evaluate when dangerous situations arise. To counter this, all 16 year-olds are invited, with their parents, to an informational meeting before they begin their driver training. Goal: to have all new driver's drive 4000 km before receiving their driver's license. The driver training schools and the municipality each sponsor one hour of free driver training to all student drivers who agree to this challenge. There has been large interest in the initiative. Approximately half of the current youths eligible have participated in the informational meetings, but only somewhere near 10% have completed the driving program.

Other initiatives aimed at this group are:

- Special inspections of the vehicles used by sixth form/high school students just prior to graduation. Information (The Norwegian Public Roads Administration)
- "Safely home for 50 crowners" is a program under consideration for youths on the weekends, that would allow them to take a taxi home, for a small sum of money, and ensure they get home safely.

For those having interest in motor sports, the following arenas have been established in the municipality:

- **Motor sport center:** Founded in 2002 to give youths interested in motor sports a place to go, where they can work on their cars, and cultivate their interests under the supervision of active leaders who are aware the importance of attitude shaping.
- **Motorcycle trials course:** There is one registered motorcycle trials course in Kvam, with its primary milieu based in the Youth Program at the Hardanger Ship's Preservation Center. The youths at the Center, who have interest in motorcycle trial driving, have the possibility to practice and hone their skills, and in turn act as valuable instructors for other youths in the municipality.

3.3.4. Violence and Criminality Prevention.

In Kvam, violence and criminality are not widely spread problems. Individuals can, in periods, place these topics more in the public eye. Often the problems have their origins in the item below concerning drug use and social maladjustment (3.3.3.), and the initiatives under this heading are appropriate for this group of individuals.

3.3.5. Drug Use and Maladjustment in Adolescents.

The problems surrounding drug use and social maladjustment are well established. One part of today's youth culture seems to involve experimenting with drugs. While this can be an expression of pure curiosity, it can also be rooted in more serious problems. Having solid and varied activities available to the youths during their free time, where differing interests are taken into account, is one positive way to work against the development of a drug culture *before* it takes hold. Both the municipality, and all the clubs and organizations within it, are

striving to maintain variation and diversity in the activities and meeting places, for these youths, which are meaningful and contribute to the deterrence of destructive behavior.

- Milieu Therapist: A person is employed to support the youngsters in running youth clubs in five of the villages in the municipality. The clubs have different activities like various games, discos, and computer clubs, etc.
- Night Hawks: The idea is to build a safer framework around non-organized gathering places for young people during the weekends when they are in the municipality's two larger centers, Øystese og Norheimsund. The Volunteer Center and the parental representatives from the local high schools organize the Night Hawks as a cooperative effort. The parents of students in the 9th grade are set up, on a rotating roster, to walk around the centers, on weekend nights, during most of the school year. The young people in these areas appear to readily, and positively accept this arrangement.
- 16th of May Arrangement: This is a large alcohol-free arrangement for youths on the eve of Norway's National Holiday, 17th of May, which is a traditionally an active evening for them, sometimes with negative results. There is cooperation between: the municipality, the youth clubs, the Night Hawks, an anti-drug organization called "the People's Action Against Narcotics", as well as others. Buses are used to get all of the young people home safely after the arrangement.
- Health Clinic for youths: Initiative has its origins in "Safety-Our Responsibility" project. The public Health Nurse has open office hours one afternoon per week for young people, 13-19 years of age. Topics addressed; birth control, drugs, depression, etc. There is no requirement for prearranged appointment. This initiative has been well received and is well used.
- The Youth Associate "Utekontakten": contains of 1.5 positions in the municipality. The greatest responsibility is to be available to adolescents/youths age between 13-23 years. The Youth Associate "Utekontakten" has contact with all kinds of youths, but especially those having difficulty adjusting. They supports activities aimed at this group.
- Follow-up of high school students living alone in rented rooms and having a hard time with the situation. The municipality follows up those students the schools have problems following up.

3.3.6. The Elderly

In Kvam 18,7% of the inhabitants are over 65 years of age, while on a nationwide basis only 15,1% are over 65. The number of people over 65, who were hospitalized due to injury, per 1000 inhabitants, on average for the last four years, shows that Kvam is slightly better off than the national average. Kvam had 31,9 injured per 1000 inhabitants, while the national average was 33,1 injured per 1000 inhabitants.

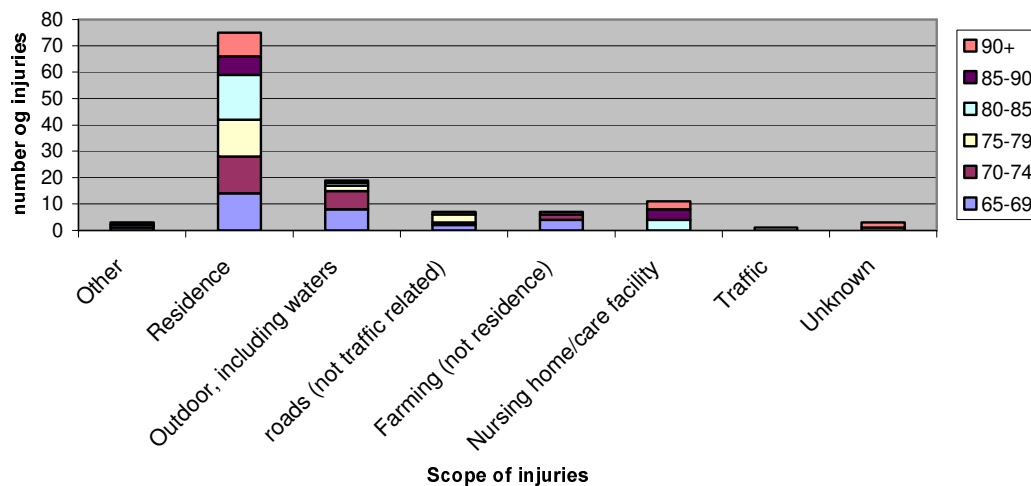
The elderly are in a special position when it comes to injuries, both with regards to frequency and scope. At the same time the elderly have an important role in society and are especially important to a well functioning local community. In Kvam, club and organization life has traditionally been important. The population age group, comprised of the elderly who live at home, and are in good health, is an essential resource for many of the nearly 300 clubs and organizations that exist in Kvam. There are, furthermore, four Retiree clubs in the municipality whose activities include some which are important for injury prevention: exercise classes and walking/hiking groups. The clubs often invite speakers in to their regular meetings to discuss topics involving injury prevention.

Kvam municipality has a Council for the Elderly, which represents the elderly and their viewpoints on topics that affect their age group. Their competence and perspectives are important in order to fulfill the goal-oriented initiatives for their age group. Kvam's Council

for the Elderly has also participated in the cross-sectorial group working with the “Safety—Our Responsibility” project, and has been involved in those areas that have affected their age group.

Plan for the Elderly. Kvam municipality is in the process of fulfilling a promise to improve living arrangements for those elderly who are institutionalized (Plan of Action for care of the Elderly). Two nursing homes are under renovation and will be completed in 2005. 83 single-occupant rooms will be built in the care facilities before the end of 2005. Safety, for the residents and employees, has been focused upon during the planning and building phases: everything from the choice of materials and colors, to modern safety equipment and aids. All of the elderly in these institutions will have their own rooms, with safety equipment to suit their needs. This endeavor was necessary for several reasons; a national single-room reform was instituted, fire safety improvement and of other technical conditions was required, and there was an important goal to make it possible to run the care facilities on a more injury preventative basis.

Scope of injuries: Kvam’s injury statistics, from its emergency wards (afternoons and evenings, from October 2003 until May 2004) illustrate that the elderly frequently injure themselves at home, the group from 65-75 years of age also have a rather large portion of their injuries out of doors.

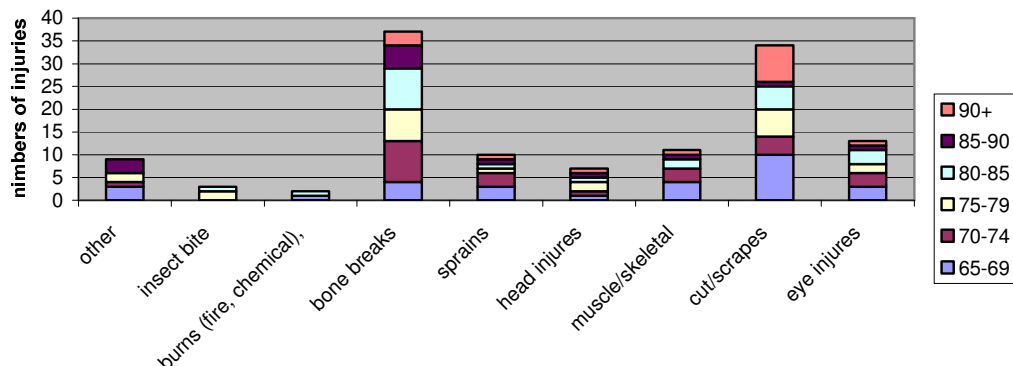


There is reason to believe that the extent of injury in nursing homes, and other homes for the elderly, is greater than it appears in the material gathered. Many of the injuries had been treated by health care personnel at the homes themselves, and were therefore not registered at the emergency wards, or they occurred during regular working hours for doctors’ offices, when activity is greatest at the institutions.

One study done from March 2001 to December 2002, reported 109 registered accidents and that a large number of them happened during the regular hours that the doctors’ offices were open. Emergency ward doctors do not make house calls after 11pm, unless there is a life-threatening injury involved. Accident registration in institutions and with those elderly who live at home will continue.

The figure below shows diagnoses for the group 65+ that are registered by emergency wards. Broken bone injuries are the most frequently registered injuries.

Injury diagnosis for elderly people, registers by Kvam emergency wards. October 02 - october 04



3.3.7. The Elderly –Bone Breaks, Falls, etc.

In order to reduce the number of accidents occurring in the homes of the elderly, information campaigns have been implemented:

- Information campaign, “Stay on your feet”, address different, potentially dangerous situations in the homes of the elderly. There was a focus on how to avoid fall-related injuries in general, and the types of “traps” they should look out for that could “knock the legs out from under” them. There was additional focus on fire hazards, information about health aids and things they could do, themselves, to avoid injuries.
- Materials have been distributed during the yearly flu vaccination day for the elderly, which is carried out by public health nurses, and through gatherings of the retiree groups. At the same time health aids have been demonstrated.
- Home health services/home health care personnel distribute information when they discover dangerous situations in the homes they visit, such as loose carpeting and loose wires crossing places where people walk.
- Focus on activity, nutrition, and general well being as important means for preventing injuries. The municipality arranges groups for the elderly who are not able to do so on their own.
- Delivery of sand to the elderly in the fall and winter, arranged by the volunteer center and Lions Club.

Nursing care: the registration of accidents in institutions and by home health services to systematize and uncover where injuries happen, to be able to avoid new injuries due to the same situations.

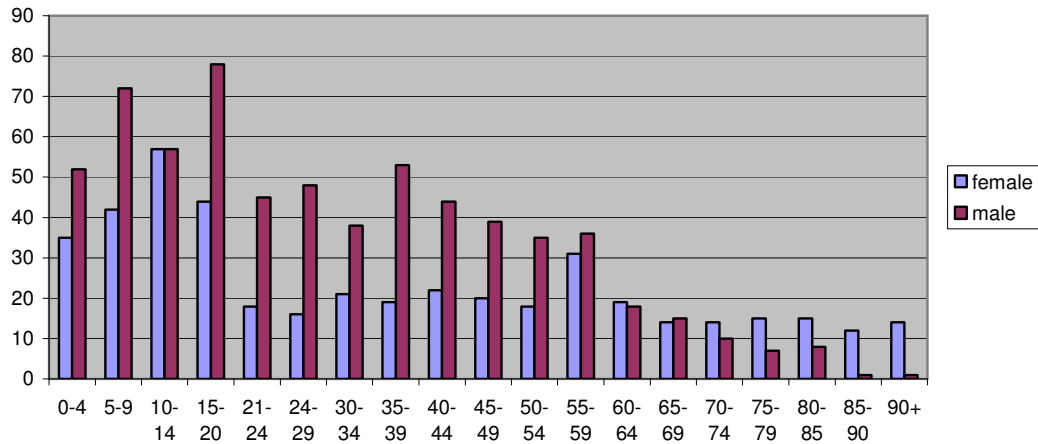
3.4. Programs that document the frequency and causes of injuries;

3.4.1 Injury Registration by Kvam Emergency Wards.

The Norwegian Institute of Public Health has developed statistics to predict the number of injuries in the different municipalities in Norway. These statistics are based on cause-of-death registration, the Norwegian Patient Register, and estimates from the The Norwegian

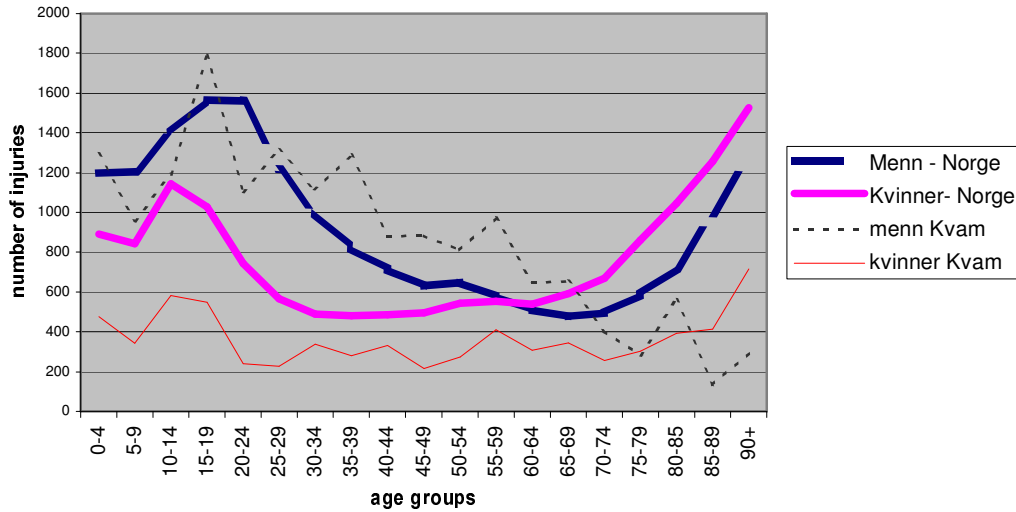
Institute of Public Health Register of accidents. These numbers indicate the scope of injury, but do not give detailed information on the local picture. Injury registration by municipal emergency wards began in October 2002. Kvam is a geographically long municipality with four different health clinics that do not use the same types of computer equipment. It was therefore decided to register injuries at the emergency wards. The registered injuries cover the entire municipality, between the hours of 4pm- 11pm, and on the weekends 8 am to 11pm. The figure below shows injuries sorted by sex and age.

Numbers of injuries registered by Kvam emergency wards, sorted by sex and age. Oktober 02 - oktober 04.



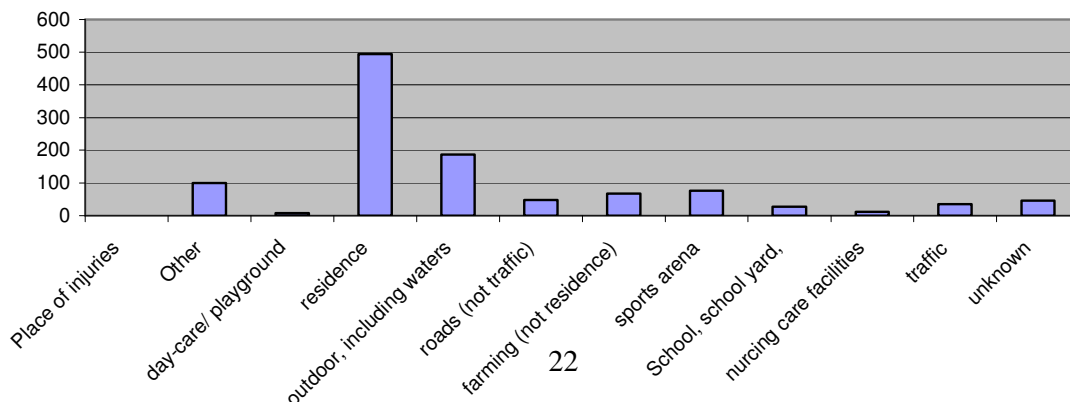
After taking into consideration the limited opening times of the emergency wards in Kvam, the data shows a rather high correlation to the numbers predicted by The Norwegian Institute of Public Health. However, it has been discovered that the different age groups make use of the emergency wards in different ways (see chart below).

**Number injured per year per 10 000 inhabitants nationwide (94 -96)
and registratered by Kvam emergency wards (Oct. '02 --May '04)**



As shown for the national average, the group consisting of young males, between 14 –20 years of age, is most prone to injury and makes use of the emergency wards most frequently. From Kvam’s registration information, where scope of injury has been correlated to opening hours for the emergency wards, one can see that the number of injuries for men is greater than that for the national average, while women have fewer injuries than the national average. These numbers may contain a systematic error, in that there is not enough information about what time of day inhabitants injure themselves. If it is true that men more often practice risk-filled activities in the afternoons and on weekends, the data could be skewed. Based upon tradition, this would be the case. At about 70 years of age, the picture from the emergency wards in Kvam changes direction, with a reduction in the number of injuries per 10 000 inhabitants in relation to the national average. This is considered to be more an expression of how this age group utilizes the emergency wards, rather than that the elderly in Kvam are so much less prone to injury than the national average. 80+ year olds in Kvam were, according to the Norwegian Patient Register, more frequently hospitalized with injury diagnoses in 2003, than they visited the emergency wards that same year. A large number of the injuries occurring in Kvam take place during leisure time. Injuries occurring at school and in the work place, are registered other places.

Place of injury, registered by Kvam emergency wards. October 02 to October 04.



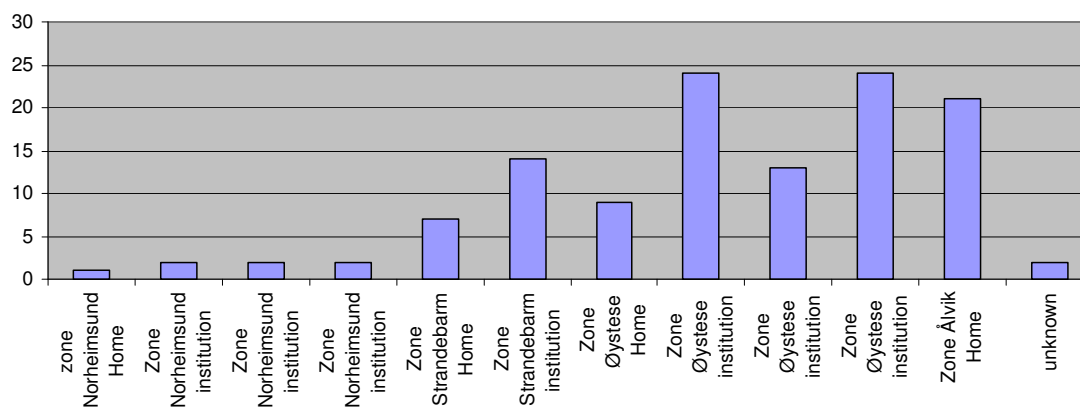
Kvam municipality has a sufficient number of doctors to meet the needs of its population. This could influence the number of less serious injuries that are brought to the emergency wards. A portion of the numbers involving young children can be considered examinations that would not have taken place had there been difficulty getting in to the doctor, or a long waiting line.

Still, local registration yields important information, even though it is not complete. Work is underway to improve registration methods in the future.

3.4.2. Registration of Accidents in Institutions for the Elderly

Kvam's institutions for the elderly register accidents and injuries on a continual basis. All four zones register each accident whether it occurs at an institution, or in the home of one who receives help from Home Health Services. Because registration is done manually, there is reason to believe that the variations between the different institutions, shown in the data, are not as great as they appear. Accident and injury registration in the health sector will continue.

Registered accidents occurring at institutions. March '01 to Desember '02



3.4.3. Other Registration

The police are responsible for registering traffic accidents in Kvam. This gives a reliable overview of the number of accidents and the number of injured/killed in traffic in the municipality during the project period.

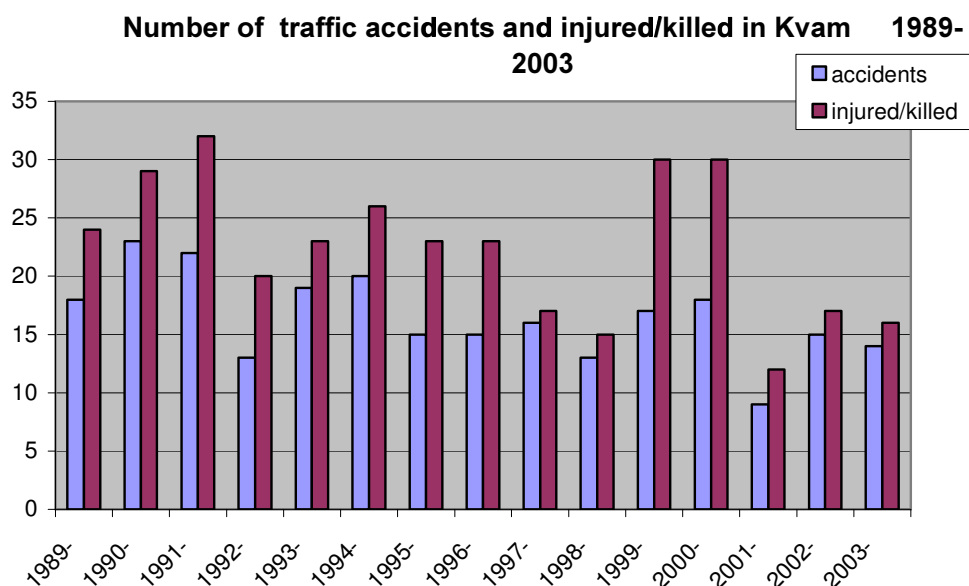
Registrations carried out by the Norwegian Patient Register, and other such organizations, can also be useful in looking for developments in Kvam, even though they, too, are incomplete. The national government has the responsibility of creating an adequate picture of the extent of injuries occurring in Norway, and more reliable numbers are expected.

3.4. Evaluation measures to assess their programs, processes and the effects of change;

Evaluation is necessary for the completion of goal-oriented initiatives. Evaluation of the different measures undertaken should be included in the planning phase, and as work begins. There are different methods for evaluation:

- Injury registration by Kvam emergency wards has been carried out since October 2002. This registration occurred solely outside of regular doctor hours (afternoons/evenings, weekends and holidays), and therefore has clear limits. Still, the information gathered is considered valuable in creating an overview for the scope of injury in the municipality, especially during leisure time, in conjunction with the information received from the Norwegian Patient Register.
- Injury registration by Kvam emergency wards made it possible to study the extent of injuries within specially defined groups (i.e. children under 3 years of age), or for particular places where injuries occur (i.e. the home, sports arenas), or for particular injuries (i.e. upper femur breaks, injury to the eye). Because Kvam represents a small population group, these things should be studied over a longer period of time.
- Evaluation with relation to the Traffic Safety Plan; consider whether the goals of greater traffic safety were reached in compliance with this Plan.

Traffic injuries were registered by the police. Statistics covering a longer period of time would indicate whether the initiatives set into motion have been effective in reaching the intended goals. The chart below shows developments in traffic injuries from 1989 until 2003.



The Traffic Safety Plan that went into affect in 2000 achieved the goal of reducing the number of accidents, and the number of injured, by 25%. Although there is the need to consider the fact that the numbers are small and that there are relatively few inhabitants in the municipality, there is evidence of a trend which comments upon new developments, and that the initiatives set in motion might be a result of the preventive work.

- The effectiveness of attitude shaping work can be measured using polling research.

There have been polling efforts carried out by school students, looking for various risk/danger situations in their homes. It would be possible to register improved safety measures in these same homes with repeated poll taking (i.e. there was no reported usage of kitchen stoves as heat sources in any but the original poll—anonymous answers)

- Utilize the members of the cross-sectorial group in evaluating initiatives related to their particular programs, procedures, and each individual's professional perspectives and expertise. One question would be whether or not solid injury prevention programs have been established in all sectors, which was one of the goals.

3.6. Ongoing participation in national and international "Safe Communities" networks.

3.6.1. Participation in the National Network of "Safe Communities"

Participation in the network of "Safe Communities" would be an important source of inspiration for continued endeavors. During this project there has been informal contact between Kvam and several other municipalities working under the "Safe Community" ideals. There has also been activity somewhat more locally, with participation in the education of public health nurses at a school in Bergen, with information regarding the "Safe Community" concept.

Formally, representatives from the project have been participants in:

- Selection of Klepp, Os, Årdal and Vågå as "Safe Communities".
- Network gathering, course arranged by The Norwegian Institute of Public Health 2002,
- Skadeførebyggande Forum (Injury Prevention Forum)

3.6.2. International Participation

As a relatively small, basically rural municipality, there are limits to how widely Kvam would be able to work internationally. There has been earlier cooperation with a "friendship municipality" in Lithuania (described below), and several other nations, involving student and apprentice exchange. Several individuals, employed by the municipality, also participate in international relations based upon their professional expertise. The Chief Municipal Medical Officer, Arna Aksnes, has participated in the Nordic Conference of Catastrophic Medicine in Kristiansand, Norway in June '04, and in the World Exhibition in Hanover, Germany in 2000 with a video presentation of emergency preparedness training in the municipality.

3.6.2.1. Documentation of work in Safety Science

The injury reduction work begun in Ålvik, an industrial community within the municipality, was the launching point for Kvam's interest in working towards accreditation as a "Safe Community". The results achieved in this limited portion of the municipality, were utilized as one of three case studies in a Doctoral thesis written by Johan Lund; "The influence of safety at work on safety at home and during leisure time." The study included three different work places having large potential dangers for personal injuries in the event an accident should occur. The employees' behavior at work was compared with their behavior during time away from work.

An article concerning this research was published in "Safety Science" 41 (2003) 739-759.

3.6.2.2. Cooperation with "Friendship Municipality" in the Baltic

Kvam has had a great deal of contact and cooperation with Marijampole, Lithuania, over the last 10 years. The cooperation has involved the giving of gifts, such as medical equipment and ambulances, and student exchange. In September 2003, 4 people, including the Deputy Mayor and the Municipal Manager from Marijampole, visited Kvam for two days. They were taught about the concept behind "Safety—Our Responsibility", and were shown what had been accomplished through the project. Emphasis was also placed on the importance of the mutual exchange of opinions and experiences. Lithuania has few resources to use on infrastructure and initiatives, yet they are also working with clear goals involving attitude shaping, in their schools, for example. They are in a process of making their own safety work with support from the EU.

3.6.2.3. International conference in Prague 2004.

The leader of the safe community project in Kvam participated in the International Conference in Prague.

3.6.2.4. Designation of Kvam as a "Safe Community"

When Kvam receives accreditation as a "Safe Community", representatives from the "friendship" municipality will be invited, and there are plans to present the work accomplished in Kvam through the presentation of abstracts at the International Conference in Bergen in June 2005.

Attachments:

1. Kommuneplan for Kvam herad, tekstdel 2002 – 2014
2. Trafikksikringsplan for Kvam herad 2000 – 2004
3. Rapport skaderegistrering Kvam legevakt 2002-2004. (blir produsert hausten 2004)
4. Kjørereglar for alpinbakkane
5. Avisoppslag om mekkeverksted for ungdom. Bergens Tidende August 2003