Farm Safety Issues in Old Order Anabaptist Communities: Unique Aspects and Innovative Intervention Strategies

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Introduction

Old Order Anabaptists, such as the Amish and Old Order Mennonites, hold a unique place in American agriculture. From the time they arrived in America during the late 1600s until today, Old Order Anabaptist communities have been inseparably tied to agriculture. Their farming practices have also made a significant impression on the larger society, not only because of their unusual, often antiquated, agricultural technologies, but also because of their consistent agricultural successes. Commentaries on Amish farming practices during the 1800s consistently praised them as being among the best farmers (Cosgel, 1993), and earlier in this century Kollmorgan stated that it is doubtful that any other socio-religious bodies have so consistently distinguished themselves in agricultural enterprise as the Amish and Mennonites (1942). Another essential factor that distinguishes Old Order Anabaptist agriculture from the remainder of the farming population is the Anabaptist view that farming is not just a method of economic survival but also a primary means of preserving their entire culture. Hostetler states that the charter of the Amish requires that members make their living from farming, rural, or semi-rural occupations (1987). Cosgel demonstrated that the Amish were not always as productive as other farmers during the mid and late 1800s, but he concluded that the reason for their lower productivity was their sacrifice of current income to increase their bequests to the next generation (1993). Other researchers have shown that the more successful Amish parents are at getting their children into farming, the more likely that the children will remain Amish (Ericksen, et.al., 1980). Amish leaders decry dwindling farmland, and the corresponding difficulty with keeping children in farming, as one of their greatest frustrations (Ericksen, et.al., 1980). Although the Old Order Anabaptists have such an inseparable link to agriculture, and even though by 1996 they had settlements in nearly half of the American states (Friesen and Friesen, 1996; Redekop, 1989), centralized statistics regarding farm-related injuries and interventions among the Old Order Anabaptists have been sparse. A review of over 50 published farm accident or injury reports from more than 30 states revealed none that specifically addressed work-related injuries within Old Order Anabaptist communities or categorized data such that these cases could be identified. Even in the three states with the largest Amish and Mennonite populations, Ohio, Pennsylvania, and Indiana, this type of summary had not been done.

To help bridge this information gap and to assist with developing an appropriate response, this paper focuses on the problem of farm-related injuries within Old Order Anabaptist communities. Basic cultural, historical, and religious beliefs are examined, farm-related fatality statistics are summarized, and best-practice intervention strategies are explored.

The authors believe that current evidence suggests that certain Old Order Anabaptist choices concerning farm safety issues may be directly related to their socio-religious beliefs. Researchers who have explored the problem of farm-related injuries have largely ignored, or dismissed as irrelevant, the contributing roles played by personally held religious beliefs or religious worldviews held by certain groups of agricultural producers or the community in which they live. This omission is reflected in the near absence of published research on topics relating to agricultural safety and health in which even secondary attention is given to the religious beliefs of those impacted by farm injuries. Even articles published by rural sociologists, economists, agricultural historians, geographers, and other social scientists have rarely addressed the relationship between religious beliefs and agricultural practices (Swierenga, 1997). The few studies that have been done, however, appear to suggest that different religious views do, in fact, influence how farmers view agriculture, how they work and how they approach risk taking (Winter, 1999; Swierenga 1997; Cosgel 1993; Salamon, 1992; Van den Barr, 1960). As the topic of Old Order Anabaptist farm-related injuries is examined, especially in relation to their religious beliefs, the authors also believe that important implications beyond Old Order communities will become apparent. For example, Amish farmers not only use production methods similar to those used by the larger agricultural community 100 years ago, but their overall worldview, based on a scriptural framework, is also similar to that of many American farmers of the nineteenth century and earlier. Therefore, by taking a close-up view of Old Order Anabaptists and the possible effects of their religious beliefs on farming practices, it may be possible to make inferences about some of the underlying beliefs and related behaviors of the larger agricultural population. Such beliefs and behaviors may, in fact, have had their roots in religious principles but with time have become diluted as rural society has become more urbanized and the overall society influenced by secular humanism. In other words, Old Order communities may provide a "window to the past" not only in regard to the farming practices of earlier generations but also in reference to some of the underlying, shared beliefs of the larger agricultural community that affect aspects of farming such as risk taking. Using such a lens may provide additional insight that would be helpful in designing more effective injury prevention strategies. Though these issues cannot be fully addressed within this paper, they are worthy of further consideration.

Cultural Background Information

As previously indicated, consolidated farm injury data concerning Old Order communities are rare. There are undoubtedly multiple reasons for the lack of information, and some probable contributors relate to cultural factors. Within the rules of their society, the Amish, especially, stress separateness from the larger culture (Hostetler, 1993), and that results in little information about their activities being communicated to outsiders. In addition, this separation creates a tendency among the Amish to shun assistance from those outside their communities (Kollmorgan, 1942; Kraybill, 1993). For example, they rarely participate in health or disability

insurance programs, a common source of data on injury and disease. Old Order Anabaptists are seldom a vocal political force, especially on the national level, and most Amish do not pay Social Security taxes (Kraybill, 1993) or participate in government farm programs (Kollmorgan, 1942). Consequently, there is little political pressure for federal or state governments to give special consideration to their situation, especially with respect to safety and health issues. Finally, reporting agencies generally do not separate farm-related fatalities according to religious affiliation, even though Old Order communities are not solely religious groups: Hostetler labels the Amish with such terms as "little commonwealth," "sectarian society," and "folk society" (1993). Kreps, et. al., classify the Amish as a subculture rather than simply a religious group and identify four dimensions of their subcultural status apart from religious beliefs: historical, geographical, social, and economic dimensions(1994).

To better define the population being addressed and to further explore the effect of socioreligious beliefs on farm-related behavior, additional historical and cultural background information is provided below.

Today's Old Order Anabaptist communities have common roots in the Anabaptist movement that began in Switzerland during the early 16th century. The first Anabaptists separated from the Roman Catholic and Reformed churches over issues such as the Anabaptist refusals to participate in military activities or baptize infants. (The term "Anabaptist," meaning "rebaptizer," was coined by opponents of the Anabaptists because of their insistence on baptizing adults, even if they had been baptized as infants.) In 1536, Menno Simmons broke from the state church in the Netherlands for reasons similar to those of the Swiss Anabaptists, and his followers were known as Mennonites. Later, in 1693, Jacob Amman began a separation from the Swiss Mennonites because of controversies concerning such issues as clothing and church discipline, and thus, the Amish sect began (Hostetler, 1993).

The largest migrations to the United States by Amish and Mennonites occurred during the mid 1700s, primarily to escape persecution in Europe (Hostetler, 1993). Since that time, these groups have continued to differentiate themselves from each other in a series of debates on various doctrinal issues (Umble, 1996). In general, the Mennonites have taken a more moderate stance than the Amish concerning contact with the world outside their communities, and many Mennonite groups have moved toward mainstream American religious traditions (Redekop, 1989). However, there remain groups of "Old Order Mennonites" that resemble the Amish in almost every respect (Redekop, 1989), including strict group discipline, an emphasis on humility and nonresistance, the control of technological innovations (Umble, 1996), and distinctive, plain clothing. The next step toward liberality on the Mennonite belief continuum is a group that this paper identifies as Conservative Mennonites. Members of this group may use agricultural technologies that are more modern than the Amish, such as steel-wheeled tractors, and they may use automobiles, but they are, overall, less modern in their technologies than typical American farmers. Because of the similarities between Conservative Mennonite, Old Order Mennonite, and Amish beliefs and practices, fatalities from all these groups are included in the statistical observations found in this paper.

It should also be noted that there are other types of Old Order or Conservative Anabaptist communities in North America, such as the Hutterites and the Old Order German Baptists. Some

of these groups use traditional practices based on the use of horses, while others live simply but have adopted modern agricultural technologies and practices, and are know as innovative producers (Hostetler, 1974). An ongoing review of farm-related fatalities within these communities has resulted in very few documented cases.

Several characteristics of Old Order Anabaptist socio-religious beliefs are important factors when considering farm-related fatalities within their populations. These include selective use of technology, a higher than average birth rate and family size, attitudes toward child labor, and beliefs about death.

Amish and Old Order Mennonite choices in regard to technology are some of the most conspicuous labels of their societies. In areas near Amish settlements, horses pulling buggies or plows are familiar sights, and such common technologies as electricity and telephones are used with reticence. The Amish contend that these technological choices help to keep their communities in tact (Hostetler, 1987). Because many of these methods also necessitate increased contact with animals, a higher than average number of farm injuries and fatalities involving animal behavior would be expected. And though some Amish farm with steel-wheeled tractors, many use no tractors or only use them for stationary power; thus, Amish fatalities caused by events such as tractor rollovers or PTO entanglements should be sparse or nonexistent. The technological distinctions regarding most Old Order Mennonites and Conservative Mennonites are less dramatic than with the Amish since many of the former groups use steel-wheeled tractors for fieldwork (Umble, 1996). However, horses and wagons are still used on some Mennonite farms.

The Amish have large families and prohibitions against birth control (Hostetler, 1993). The average number of live births per Amish couple is seven, and the Amish population doubles approximately every 22 years (Hostetler, 1993). In one survey of the Amish in Lancaster County, Pennsylvania, 53% were under the age of eighteen (Kraybill 1989). It is not uncommon to encounter Amish families with 10 or more offspring ranging from infants to married adults. In addition, teaching children the importance of work is a high priority for Amish parents (Hostetler, 1993). Amish children are expected to begin helping with chores soon after they can walk, and children frequently begin driving teams of horses before the age of ten (Kraybill, 1989). In addition, since work is seen as a calling from God and not just a job, and since it is a central fiber in the fabric of Amish community life, the integration of children into the family workforce takes on a sacred dimension (Kraybill, 1989). Kraybill states: Amish children assume daily chores by five or six years of age, and their responsibilities in the barn and house grow rapidly. They are not seen as economic burdens but welcomed as blessings from the Lord and as members who will contribute their fair share to the family economy (1989, p.74).

These socio-religious beliefs and practices point toward the probability of higher than average child injury and fatality rates in regard to participation in work-related activities. However, Old Order beliefs and practices may, in fact, result in lower than average injury and fatality rates with respect to other hazardous activities in which Amish children do not generally participate, such as riding in automobiles or operating ATVs, motorcycles, or snowmobiles.

The Anabaptist view of death is also a significant factor in addressing farm fatalities among their populations. While death is not treated lightly among the Amish, they accept the biblical view that life in this world is temporary and that eternity is infinitely more significant (Hostetler, 1993). According to Hostetler:

For all people who cling to life and enjoy it to the full, death is the greatest menace. The Amish, who profess not to have conformed to this world, turn to the promise of life beyond death. Their belief in the divine order of all things, including immortality, is a source of comfort to the mourning family and community (1993, p.206).

The central Anabaptist concept of "gelassenheit," or yielding to authority, involves submission to the will of a sovereign God (Kraybill 1989), even in matters of death. This belief that "the best is yet to come" may make it difficult to motivate Old Order Anabaptists into complying with safety efforts simply out of a fear of death or serious injury.

Anabaptist Fatality Statistics

In order to begin constructing an empirically based picture of Old Order Anabaptist farm injury patterns, and to see if their socio-religious beliefs may affect those patterns, ninety-five (95) case reports of Old Order Anabaptist farm fatalities were drawn from the records of Purdue University, The Ohio State University, Pennsylvania State University, the Commonwealth of Kentucky Cabinet for Health Services, the New York State Department of Health, Finger Lakes Occupational Health Services (N.Y.), the New York Center for Agricultural Medicine and Health, the University of Wisconsin, and from newspaper articles and farm reports submitted by a variety of sources. The inquiry focused on identifying fatalities that occurred during the performance of, or exposure to, farm work or within the farm environment. In addition to farm-related fatalities, several deaths were documented which involved motor vehicle and buggy collisions, but these were not included in this analysis.

For reporting purposes, children were considered individuals 15 years of age and younger, a classification consistent with most agriculture-related injury statistics. Part of the reason for this distinction was that persons under the age of 16 years are not legally permitted to operate farm machinery unless they are formally trained or are working for their parents or guardians. Furthermore, in the Amish community, children, especially boys, do not generally attend school beyond the eighth grade or age 16, the minimum age for formal education mandated by most states.

Information regarding the cases was initially categorized according to the following factors: state of origin, i.e. Ohio; year of fatality; age of victim; time of fatality; day of week of fatality; month of year of fatality; and finally, source of injury. In several instances, specific information, such as time of day or date of death, was not reported in the original case summaries.

Of the ninety-five (95) cases identified as Old Order Anabaptist farm-related fatalities, four cases (4%) occurred in the 2000s, seventy-six cases (80%) occurred in the 1990s, and fifteen (16%) occurred in the1980s. Seventy-six (76) of the fatality victims were identified in the reports as Amish, 18 were Mennonite, and one victim's religious affiliation was undetermined. Figure 1

shows a breakdown of the cases in regard to the state from which the fatality report originated. The distribution of fatalities by state was generally reflective of the distribution of the Old Order population. The one noted exception was the lower number of cases reported from Ohio, which has the second largest population of Amish.

Gender

As would be expected in a study of agricultural, work-related fatalities, the vast majority (80%)

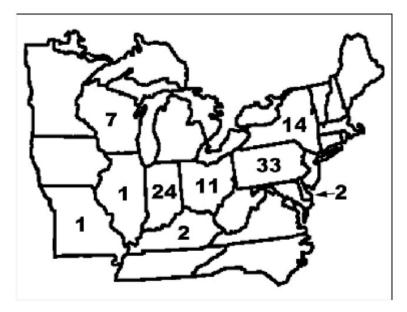


Figure 1: Fatality Reports by State

of the cases occurred among males. This figure, however, is a lower percentage than would be found in non-Old Order Anabaptist farm communities, suggesting greater involvement of females in agricultural tasks. In two cases (2%), the sex of the victim was not reported.

Age

Of the 93 cases in which the age of the victim was reported, 63% of the fatalities were to children fifteen years and under, and 40% occurred in children six years and under. In at least 20 of the fatalities involving children fifteen years and under (22% of all fatalities where age was reported), the victim was directly engaging in work-related activities at the time of death ; the remaining occurred in a work-related environment. Youth aged 16-19 comprised only nine (10%) of the fatalities. In 22% of the cases, the victims were between the ages of 20 and 40. Only five fatalities (5%) were documented that occurred in individuals over the age of 40 years. The latter figure is dramatically different from the distribution in non-Old Order populations where those over the age of 60 typically account for more than one third of reported fatalities (Purschwitz, 1990; Whitman, 1995). Among females, all the victims were aged 17 years and

under, and fourteen of nineteen female victims (74%) were under the age of 10 years. The average age of all fatality victims was 14.6 years; the median age was 11 years. Figure 2 provides a representation of the overall age distribution of fatalities.

Source of Injury

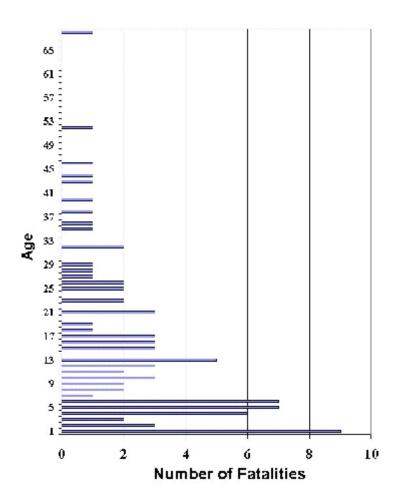


Figure 2: Fatalities by Age

There is little consensus among researchers on how to group agricultural injury data regarding the source of injury (Purschwitz, 1990; Murphy & Yoder, 1998). Of particular concern in this report was the role of secondary sources, especially animal behavior, as contributors to the fatalities. For example, in 40% of the cases the immediate source of injury was due to being run over by a wagon or other vehicle. Such fatalities were sometimes attributable to human behavior such as a father backing over an infant or the victim losing his or her balance and falling off a wagon. However, runovers were often precipitated by a horse becoming unruly and throwing the vehicle out of control, thereby ejecting the victim into the path of the wagon wheels. Consequently, it was important to distinguish between primary and secondary sources of injury, especially when animal behavior played a role.

The following categories were chosen in regard to the primary source of injury: being run over by a vehicle; direct animal behavior (i.e., being kicked or stepped on); falls; entanglement in farm machinery; suffocation; being crushed by or between heavy objects or machinery; drowning; being struck by an object; fire/explosion; heat stroke; tractor rollovers; unintentional firearms fatalities; and "other" fatalities. Figure 3 summarizes the fatality statistics for sources of injury.

By far, the largest number of fatalities was attributed to being run over by vehicles. Of all the fatalities, 38 fell into this category (40%), and as would be expected in the Old Order Anabaptist community, a large number of these (27) involved horse drawn vehicles. Unlike data reported on farm-related fatalities within the larger agricultural community in which well over 50% relate to agricultural tractors, only nine Old Order Anabaptist cases, or 10%, involved tractors. In regard to secondary sources of injury, 21 of the fatalities were attributable to human behavior and 15 to indirect animal behavior . In one run-over case, the secondary sources were uncertain, and in another, a wagon tongue broke, causing the victim to be ejected from the vehicle and run over, thereby making machinery failure a secondary source of injury.

In children 15 years and under, being run over caused 27 of 59 fatalities (46%). Only eight of the latter cases were attributable to indirect animal behavior, while 19 were attributable to human behavior, either on the part of the child or an adult. In approximately eight cases, it appears that

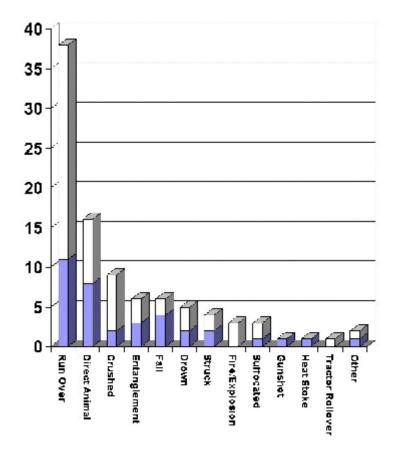


Figure 3: Fatalities by Source of Injury

children were run over by adults or older siblings who were simply unaware of the child's location. In 15 cases (16% of total fatalities), children were run over after falling from farm implements, wagons, or tractors they had been riding on or driving.

The second most prevalent source of injury to both adults and children was direct animal behavior, such as being kicked, stepped on, or dragged by horses, mules, or cattle. Sixteen cases (17% of total fatalities) were listed in this category. In one of these cases, horses dragged the victim when he became entangled in reins after a vehicle tongue broke, thereby making machinery failure a secondary source of injury. Nine of the direct animal fatalities (9% of total fatalities) involved children 15 years and under. In addition to the direct animal-related fatalities, sixteen cases (17% of total fatalities) were related indirectly to animal behavior such as bolting. Therefore, 34% of all fatalities were directly or indirectly related to animal behavior. (See Figure 4.)

In nine cases (9%), the victims were crushed between or by heavy objects, and six of them were

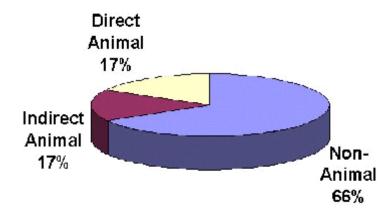


Figure 4: Fatalities by Animal Behavior

aged eight years and under. Five of these children were crushed by heavy objects, and one was pinned between a tractor and a wagon. One of these fatalities was indirectly caused by animal behavior: horses bolted, thereby throwing a boy and two logs from a wagon, and the boy was crushed beneath the logs. The only adult victim was crushed between a skid steer loader bucket and frame when a hydraulic line broke.

In regard to other sources of injury, entanglements and falls proved to be significant sources of injury, as they are in the general farm population (NSC, 1998). A total of five victims died by drowning; three drown in farm ponds, while the other two were small children who fell into horse tanks. All of the suffocation victims (3) died in grain or feed bins. One fire victim was killed when a leaking propane heater exploded in a farm building; the other two were children who died in a barn fire after playing with matches in a hayloft. One Old Order Mennonite youth was killed when a steel-wheeled tractor overturned. The lone firearms victim was an adolescent who was crawling through grass, was mistaken for a woodchuck, and was inadvertently shot by a

neighbor. In the "other" fatality category, one of the victims had been using a horse drawn implement; the horses were later found in the barn, while the victim was found in a field with head and chest injuries from which he later died. No specific source of injury was determined. In the remaining case classified as "other," the victim was reported to have experienced a seizure, came into contact with an electric fence, and suffered cardiac arrest.

Month

Recent statistics show that summer months and Midwestern harvest times are peak periods for all agricultural fatalities (Murphy & Yoder, 1998). Some reasons for this include increased exposure to work hazards during the growing season, longer workdays, and a larger number of workers, such as children out of school (Murphy & Yoder, 1998). Fatalities documented in the Old Order Anabaptist community followed a similar pattern, as shown in Figure 5. June is usually a prime time for haymaking, corn planting, and crop cultivation among the Amish. The pattern for fatalities according to month was similar between all cases and those involving children. In both groups, the number of fatalities for July appeared unexpectedly low.

Day of Week

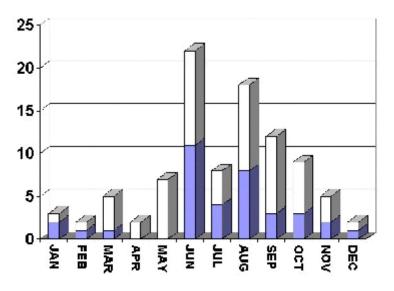


Figure 5: Fatalities by Month (Children shown in white)

Sunday is normally the day with the lowest number of farm fatalities, (Purschwitz, 1990; Murphy & Yoder, 1998). In addition, because of the Anabaptist belief in a Sabbath rest, it would be expected that the fewest farm fatalities would occur on Sunday. That was indeed the case with the observed cases, though Thursday was only slightly higher in fatalities. A possible reason for the Sunday fatalities is the fact that livestock must still be cared for on Sunday, and thus, some chores must be done. In the 94 cases where the day of fatality was discernable, Friday had the highest percentage of fatalities with 20%, followed by Wednesday with 18%, Saturday with 16%, and Monday and Tuesday with 14%. For children 15 years and under, 20% were killed on Saturday, 19% on Wednesday, and 15% on Friday and Tuesday. In the 53 childhood cases in which complete information was reported, approximately 38% of the fatalities occurred during the weekend period of Friday evening through Sunday. Apart from the fact that children are out of school during this time period, another explanation for this finding is possibly the increased involvement of members of the Old Order Anabaptist community in off-farm occupations, causing a greater intensity of farm work over the weekend period. Figure 6 shows fatalities by the day of week.

Fatality Statistics Observations

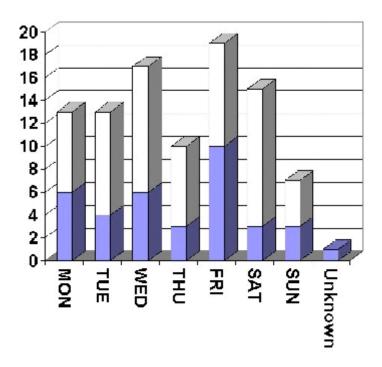


Figure 6: Fatalities by Day of Week (Children shown in white)

Though children are frequently the victims of fatal farm injuries in the overall population (Field & Tormoehlen, 1982; Murphy, 1992; National Committee for Childhood Agricultural Injury Prevention, 1996), the percentage of Old Order Anabaptist childhood fatalities was unexpectedly high in the cases identified and summarized. The National Safety Council reports that 11% of agricultural work fatalities in 1996 were under 15 years of age (NSC, 1998). (National Safety Council data is reported as "14 and under," whereas this report classified data as "15 and under".) In comparison, for the current survey, the percentage of fatalities involving children or adolescents under 15 years of age was 59%. As previously indicated, the average age of victims in the current survey was 14.6 years. In contrast, the 1996 farm fatality summary for Indiana, a state representing 26% of the cases currently being considered, revealed an average age of 59 years (Field, 1996). A study of 739 farm-related fatalities in Indiana revealed that 34% involved

persons over 60 years of age (Purschwitz & Field, 1986), while only one fatality victim identified in this summary was over 60 years of age.

It is possible that the high number of child fatalities may be related to the Old Order Anabaptist beliefs concerning large families and the involvement of children in farming activities. However, several mitigating factors should also be considered in regard to the lower than average age of victims observed in this summary. First, the number of cases considered was too small to draw concrete comparisons between the Amish and non-Amish populations. In addition, national sources of injury data do not routinely collect data on workers under the age of 16 (Murphy & Yoder, 1998); therefore, non-Amish childhood farm-related fatalities might be understated. It is also possible that a younger than average retirement age among the Old Order Anabaptist farmers further contributes to a lowering of the average fatality age. For example, Hostetler reports that the Amish may retire from active farming at age 50 (1983). According to Meyers, the tendency of Amish farmers in northern Indiana is to retire in their late 50s to allow other family members to get started in farming. However, they generally remain active on the farm or employed in other areas (1998). Therefore, given these factors, it cannot be concluded that childhood farm-related fatality rates are higher among the Amish than in the general population. It should also be noted that Jones reported that overall mortality and morbidity appeared lower in the Amish population than in the general population (1990).

It is also inappropriate to compare child mortality rates between the Old Order Anabaptist community and the overall farm population without taking into consideration the exposures non-Amish children have to hazards typically not found in Old Order Anabaptist communities. The incidence of fatalities associated with motor vehicles, motorcycles, ATVs, snowmobiles, firearms, and other agents are much higher in the general population because such agents are rarely used by Old Order children. Even activities such as football and other contact sports result in several deaths per year (NSC 1998). Though Amish children are required and encouraged to begin contributing to the family and community well-being at an early age, for religious and cultural reasons, they are prohibited or discouraged from pursuing most recreational activities that typically dominate the lives of many North American farm children.

Since a significant number of children were directly involved in work-related activities at the time of their deaths, it is evident that some Amish children were attempting tasks too dangerous for their maturity levels or were being placed or allowed to be in hazardous situations (as is undoubtedly also the case with some non-Amish children). However, it should be noted that Hostetler perceives that in Amish society parents attempt to create a safe environment for their children, protecting them from physical and moral danger (1993). Hostetler and Huntington's research also indicated that young children are encouraged to be useful but are not pushed to perform tasks beyond their abilities (1992). Still, even if the typical Amish farm family conforms to the standards of Hostetler and Huntington's comments, it is clear from the results of this summary that exceptions occur.

It should also be stated that even though child labor is clearly beneficial to Amish families and communities, it would be erroneous to conclude that the Amish place low value on their children or simply use them for labor. Hostetler states, "Children are treasured. Child care and nurture are

the most important adult activities." (1983). Erickson reiterates that the Amish value children highly (1980).

Run-overs were a very high percentage of the overall fatalities. Apart from small children being run over inadvertently, many of these fatalities occurred when a rider was ejected from a vehicle. It appears that Old Order farms could benefit from initiatives that have proven successful in the general farm population regarding tractor safety. These include warnings against extra riders and possibly the introduction of safety devices such as child passenger seats and safety belts in vehicles.

Animal behavior was a significant factor in many runovers in addition to the cases where animal behavior resulted directly in the death of the victim. Approximately 35% of all fatalities were related directly or indirectly to animal behavior such as kicking or bolting. In contrast, according to the National Safety Council, only 6% of agricultural work fatalities in the overall farming community were attributable to animals in 1996 (NSC, 1998). This finding suggests the need for further consideration of possible injury prevention interventions, such as more intensive instruction about handling and training farm animals, more selective use of livestock, reevaluation of certain work practices, and utilization of specialized livestock handling equipment.

Intervention Strategies

In order to effectively influence change among the Amish, it is essential to understand their social structure and attitudes toward those outside their communities. Drake and James point out that this is necessary for making education information compatible with doctrine and community, and applicable to the context of their lives (1993).

In contrast to modern society, Old Order Anabaptists view tradition as superior to change (Kraybill, 1993), and as previously indicated, Old Order communities are generally resistant to assistance or interference from sources outside their church communities. Usually, this simply means avoiding participation in activities and programs outside their groups. However, throughout their history in America, matters of conscience have periodically brought the Amish into direct conflict with the rules of the larger society. They have frequently prevailed in their ability to practice their beliefs unhindered by the state or have negotiated acceptable compromises in such areas as military service, education, and taxation (Kraybill 1993). Some Amish are currently seeking exemptions from child labor laws that restrict their youth from certain activities, such as working in sawmills. As Kraybill states, "Reluctant to demand rights and privileges, the Amish will not, however, acquiesce on deeply held beliefs but will respectfully take a stand, even if it brings fines, imprisonment, prosecution, or migration..." (1993).

It is also important to understand the Old Order Anabaptist worldview that is rooted in the biblical doctrine of the two kingdoms: the kingdom of God, and the kingdom of the world (Kraybill 1993). In general, those within the Amish community (or similar groups) are viewed as belonging to the kingdom of God, while everyone outside their communities belongs to the kingdom of the world. The Amish hold strongly to the belief that these two groups should remain

as separate as possible so as not to contaminate the purity of their spiritual communities. These views create an inherent tension in attempts to establish cooperative relationships between the Amish and outsiders, even on issues that might prove beneficial to both communities. This tension is especially evident in dealings with the government: Old Order Anabaptists view it with suspicion because its use of force to gain compliance violates the Anabaptist belief in non-violence (Kraybill, 1993).

However, exceptions to this strict separation of church and state, or church and other outside organizations, are possible. For example, in 1995, LaGrange County, Indiana, the home of one of the nation's largest Amish settlements, experienced a high number of Amish farm-related fatalities, almost all children. In response, a series of meeting were held involving Amish leadership, local county Extension educators, concerned citizens, and Purdue University's Agricultural Safety and Health Program staff. The result was the formation of the Northern Indiana Family Safety Committee, a group of Amish and non-Amish leaders who address safety issues within the Amish and the non-Amish communities. In some of their first efforts, the committee sponsored a series of farm safety workshops specifically targeting the Amish community. To date, approximately eleven of these events have been conducted, involving over 2000 members of the Amish community. The committee also produced and distributed, both in Indiana and other states, a culturally and spiritually sensitive farm safety coloring book called Weed in Our Gardens for Old Order Anabaptist children. Approximately 20,000 copies of this book have been distributed to a wide variety of audiences, including nearly all second and third graders in the Amish school districts in the LaGrange County area. Recently, the committee coordinated a program to install SMV emblems and reflective tape on Amish buggies throughout the community. They also facilitated the design and production of an Amish buggy/auto safety brochure targeting tourists in highly Amish areas. Approximately 70,000 copies have been distributed in several states.

In another effort to influence Old Order Anabaptist children with farm safety information, Penn State University's School of Nursing developed an interactive board game called "Amos and Sadie's Farm: A Pathway to Safety." The game quizzes players about safety issues, such as potentially dangerous aspects of haylofts, silos, and livestock.

A variety of other cooperative intervention efforts were presented at the Extension Education in Anabaptist Communities conference in Shipshewana, Indiana, in May 1998. Among the recurring ideas presented was the concept that Amish settlements have doctrinal similarities but also characteristics unique to the individual communities. Thus, attitudes toward outsiders, and cooperative efforts with such parties, can vary significantly between settlements depending on the rules or "ordnung" of the individual communities. Conference participants reiterated that the more professionals know about Anabaptist doctrine and its impact on lifestyle, the more effectively they can interact with this population. Also, according to Extension educators at the conference, in dealing with the Amish it is more effective to address them in informal settings instead of through structured programs or external services from state agencies. As Kraybill states, "Instead of secondary relationships, Amish life revolves around primary, face to face social ties..." (1993). It is also important to avoid a patronizing attitude or the image of being an "outside expert," according to the Extension educators at the conference. A second conference for professionals working with Old Order Anabaptist communities is scheduled for March 2001 in Holmes County, Ohio, the location of the largest Amish settlement in the country. The Indiana State Police have also initiated intervention strategies of conducting informational meetings with Amish audiences and providing special training to law enforcement personnel in counties with Amish populations. The focus of these meetings has been on highway safety and responding to emergency situations.

Recommendations

1. To better address the overarching issue of Old Order Anabaptist farm-related fatalities, a centralized, ongoing database and a more uniform reporting procedure would be helpful for gathering and quantifying relevant data. This would enable the Old Order Anabaptist community, and professionals working with them, to better understand the problem, draw more concrete conclusions, and develop more effective prevention strategies for reducing injuries and fatalities among their population.

2. Efforts should be made to develop more farm safety materials that are culturally and religiously sensitive to the Old Order Anabaptist community and that reflect their traditional agricultural practices. Special attention should be given to material oriented toward children but also designed for use in a family setting to communicate safety messages.

3. Appropriate farm safety information should be made available for dissemination through the channels most frequently used by the Old Order Anabaptist community, such as their community schools, livestock auctions, and farm markets.

4. Community-based farm and family safety committees should be encouraged in geographical regions with high concentrations of Old Order Anabaptists.

5. In response to the large number of small children run over in circumstances where the driver was unaware of the child's location, the use of more clearly defined or fenced-in play areas should be considered.

6. The role of extra riders on horse drawn equipment needs further exploration to determine the actual risks involved and possible intervention strategies, such as passenger seats in buggies and wagons and improved seating on horse drawn implements.

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