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Foreword

This publication, *Safety in Ice Hockey: Fourth Volume*, contains a collection of research papers presented at the Fourth Symposium on Ice Hockey held 5–6 May 2002 in Pittsburgh, Pennsylvania, in conjunction with the standards development meetings of Committee F08. This symposium was the fourth in a series: the first being held in 1987 in Montreal, the second in 1992 in Pittsburgh, and the third in 1997 in St. Louis. The objective of the symposium and corresponding publications has been to review the current state-of-the-art and science of ice hockey injury prevention.

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Overview

This is the fourth in a series of texts addressing issues of safety in ice hockey—the first being published from the symposium held in 1987 at Montréal. Much has been learned in the intervening years; however, unnecessary injuries (in various forms) still persist today. The intent of these symposia was to gather together individuals of expertise and experience in various issues affecting the safety (in the broadest sense) of participants in ice hockey. The resulting publications have been in large part an attempt to communicate these facts and ideas to the broader community and to provide a source for future reference. The papers contained address a diverse range of topics from the fields of sports science, sports medicine, athletic training, biomechanics, risk factor management, epidemiology, sports psychology, injury surveillance, sports equipment standards, physical conditioning, behavioral factors in sports, as well as case reports from individuals associated with national sports governing bodies, playing facilities, officiating, and playing rules.

Acknowledgments

The game of ice hockey is a collective group activity possessing social, economic and historical values and expected norms. The game is exciting and entertaining. It provides a personal means for maintaining fitness and intrinsic enjoyment. Inherent within this game is the expected physical contact (collisions) between rival players as they pursue control of the puck and ultimately score in the opposing team's net (this being no trivial matter). In general, entrenched too is the perception that at more competitive levels, it is inevitable (if not desirable) for players to behave more and more aggressively to gain tactical advantage over their opponents. To this end, "safety" is a difficult task to achieve.

Over the past few decades, local communities, national athletic associations, equipment manufacturers and clinical organizations have worked collectively to reduce the occurrence, severity, and long-term consequences of injuries. Their efforts should be applauded and have met with substantial progress, such as improvements in protective equipment, enhanced conditioning and training techniques, great investments in tracking and recording of injury rates, advances in medical treatment and rehabilitation, as well as modifications to the rules of play and conduct. However, it is of great concern that traumatic injuries still afflict many individuals and that many of those injuries may be preventable. Collectively, there remain difficult questions to be asked and even harder decisions to implement and enforce; for example, what degree of injury risk are we willing to accept? How far are we willing to go to enforce changes in equipment and conduct?

To aid us in addressing these continuing concerns, this text presents research and observations relevant to ice hockey safety. This includes the means of measuring the form, presentation and prevalence of various injuries as well as their observed occurrence. Equally important, this text also discusses strategies of prevention, be it by means of protective equipment, different approaches to managing conduct of players, coaches and parents, or better implementation of training and conditioning. The manuscripts are organized into four general categories: Measures of Injury; Head Protection and Concussions; Sportsmanship and Social Issues; and Training and Performance Measurement.

The equipment to protect players continues to improve, the playing rules are shaped and enforced to reduce injuries, and coaches use better techniques to help players avoid injuries.

But the players are faster and bigger, and we still have to contend with injuries in ice hockey and in other sports. We do not think that we are doing anything wrong, but feel that we must continue to investigate, evaluate, rethink old ideas, and attempt new strategies and tactics to eliminate injuries or, at least, to limit the extent of the injuries to players.

There are colleagues at ASTM who must be mentioned. Roger Schmidt was the Chairman of F08 when this symposium was being planned. Martyn Shorten is the chair of the symposium committee and he has been extremely supportive and helpful in the planning and presentation of this symposium. Jim Olshefsky, as Staff Manager of F08, has provided both support and expertise in planning. Dorothy Fitzgerald has been supportive of this project from the very beginning and coordinated the symposium. Crystal Kemp is to be congratulated on her Herculean task of editing the Proceedings and getting this volume out in record time.

We acknowledge the support of HECC (Hockey Equipment Certification Council), USA Hockey, and the USA Hockey Foundation. We thank Dr. Henry Cross III, President of HECC, who was supportive of this symposium from the start. We want to thank the leadership of USA Hockey and the USA Hockey Foundation, Walter L. Bush, Jr., President, and Doug Palazzari, Executive Director, for their support and encouragement for this project and their great interest in the prevention of injuries and the safety of hockey players.

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