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**PROMOTING INNOVATION IN THE DELIVERY OF HEALTH CARE
PRESENTED TO THE ALBERTA HEALTH INDUSTRY ASSOCIATION**

**MAYFAIR GOLF & COUNTRY CLUB
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- **Good morning/afternoon, everyone.**
- **I'm happy to have this opportunity to discuss the importance of research and promoting innovation in the health-care industry—and a little bit on how we got to where we are today.**
- **Now, as I've said many times in the past, the creation of Alberta Health Services is the largest merger in Canadian history.**
- **Alberta Health Services is the largest health-care organization in Canada, the largest single-employer in Alberta and one of the largest employers in the country.**
- **Moving to a single, centralized health system is a definite shift in the direction -- and innovation -- for how health care is organized in Canada, and I know the rest of the country is watching us very closely.**
- **During my first few months, my focus was on stabilizing the formal structure of the organization, establishing a strategic direction to guide us forward and to get started on finding budget savings.**
- **Last year, the challenge was to achieve a balanced budget while protecting access to and quality of health-care**

services. We now face a different and much more pleasant question: how best to improve access and quality using the increased funds received in this year's provincial budget and the savings we achieved in 2009.

- **Knowing what our funding will be five years down the road better enables us to plan major innovations and initiatives. These initiatives might take two or three years to provide a return, but they are necessary for the longer-term sustainability of our health system.**
- **Our goal is to be the best performing publicly funded health-care system in Canada, and we're committed to getting there.**
- **We're already beginning to see some of the tangible benefits of the merger, in the sharing of ideas and what economies of scale can do.**
- **Because of those benefits, we've been able to develop some really exciting and innovative work throughout the organization.**
- **You can define innovation in many ways, but in terms of health care, I see it as the ability to change the conditions in a care setting to improve the achievement of intended results (effectiveness) or the ability to deliver them**

(efficiency).

- **Innovation can involve developing a new technology to improve access, quality and sustainability, or it could be using a well-established technology in a new way.**
- **And innovation is not restricted by geography, and one of the goals of the amalgamation of the 12 former health entities was to ensure that best practices in any one part of the province could be introduced across Alberta.**
- **Many of these innovations can be found right here in Edmonton.**
- **Take, for example, the computer-assisted rehabilitation environment—CAREN for short—that is used to help rehabilitate Canadian Forces personnel and civilian patients who are learning to balance and walk again.**
- **CAREN will be a major part of the Courage Centre initiative, a hub for advanced rehabilitation technologies designed to improve patient recovery. The centre will be based at the Glenrose Rehabilitation Hospital and will officially open this fall.**
- **What CAREN does, basically, is bridge virtual reality and rehabilitation robotics. The patient stands on a platform**

that responds to their body position while they walk through scenes they view on the video screen surrounding them.

- **Doctors and therapists can then adjust their patients' rehabilitation programs based on assessments made through CAREN.**
- **This technology will also be used by a variety of adults and children, including amputees, stroke patients who have lost motor skills, cerebral palsy patients with gait abnormalities and patients with spinal cord injuries.**
- **It can also be used for post-traumatic stress disorder therapy and with seniors with impaired cognition and memory.**
- **To further develop the usefulness of this technology, a \$250,000 Innovation Agency project grant from Alberta Advanced Education and Technology will support businesses in creating rehabilitation products and systems using CAREN.**
- **Down the road in Calgary, we're also using state-of-the art robotic technology to perform objective stroke assessments at the Foothills Medical Centre.**

- **Just to give you a bit of background, the severity of a stroke is usually measured by clinicians who observe patients performing different tasks and then note their sensory, motor and cognitive skills.**
- **Without having a precise measurement system, a patient's score ends up being determined in a very subjective way, and can differ from clinician to clinician.**
- **Now, this exoskeleton robot, called KINARM (that's short for "kinesiologic instrument for normal and altered reaching movements"), is used to quantify a stroke's effect on a person's ability to see, move, sense, think, talk and hear.**
- **Patients are connected to the robot and then asked to copy motions or touch targets shown on a display. The robot provides support or resistance to their movements, compares these movements to normal responses, and identifies the differences.**
- **With these precise measurements, the KINARM robot can identify deficits in minutes. On some occasions, these deficits can be quite difficult for a clinician to pick up, even after repeated standard clinical exams.**

- **Of course, innovation isn't just about 'machines that go ping' to quote from a great innovator, Monty Python. It's also about management technologies, developing new facilities and procedures to improve health care for Albertans.**
- **This month we're also opening a new medical assessment unit, or MAU as they're commonly known, at the Royal Alexandra Hospital.**
- **Instead of waiting in an emergency ward to be admitted to hospital, patients will be assessed and then transferred to an MAU. MAU physicians will continue the patients' treatment to determine and begin ongoing care.**
- **Opening these new MAU beds takes pressure off emergency departments by freeing up emergency beds, physicians and other care providers.**
- **The unit at the Royal Alex is slightly different from the first of these we opened, at the Peter Lougheed Centre in Calgary. We want to evaluate both and see what difference they make to care.**
- **We are confident these MAUs will make Alberta a national leader in changing and improving the way emergency department patients are assessed, treated and admitted to**

hospital when they need further care.

- **These and other innovations across the province will ensure Alberta's place as a leader in delivering quality health care services.**
- **Suffice it to say, we wouldn't be able to develop these innovations without strong research partners. That's why our strategic direction identifies research participation as a critical strategic priority that will make the organization fit for the future.**
- **While pockets of long-standing health research excellence certainly exist in Alberta, the former regional system did not make it easy for these ideas to spread throughout the province. This resulted in lost opportunities to generate and use research findings to improve health services and health-care delivery.**
- **Worse, there was competition between Edmonton & Calgary and being the best in Alberta (or Western Canada) was sometimes seen as the goal. We need to set our sights much higher than that. Our competition is not local, we should be seen to be world leading. And the good news is that we already are in many areas.**
- **Just like the formation of a single provincial health authority allows us to share best practices, it provides the opportunity to**

transform our research agenda into an internationally recognized program.

- **A program based on an integrated model of health research where the health-care providers, universities, and other partners work together. This has been proven to be effective in creating world-class research environments, something we plan to do in Alberta to build upon strengths of programs already in place.**
- **By creating and fostering programs of excellence with focused health research agendas, AHS can further address key priorities of improving health-care access, quality and sustainability for all Albertans.**
- **These province-wide, collaborative programs will integrate research and service delivery, and identify research priorities to have the most positive effects on the well-being of Albertans.**
- **They will also allow us to streamline and accelerate reviews of research protocols for ethical, scientific, privacy, and resource impacts.**
- **They will start with and be founded on integrated research programs. Programs developed collaboratively between University partners, involving Alberta Health Services in those research and innovative programs which involve clinical, public**

health or health services research. And industry partners where relevant too.

- **We will also develop and coordinate common and accessible health research databases and work with information owners, custodians and other stakeholders to improve access for research purposes.**
- **Our coordinated programs will increase clinical, public health, and other research outputs that will be applied to improve health outcomes, health service delivery, and disease and injury prevention results across the province.**
- **We will develop a strategic plan for investment and support, and accordingly contribute to world-class research programs for Alberta and Canada.**
- **By leveraging significant provincial funding and economies-of-scale, AHS can invest in infrastructure for research in clinical, health services, and public health and community research.**
- **The financial models put in place will be transparent and consistent to provide accountability for research funding and the outcomes from that research.**

- **As for staff resources, developing trainee and recruitment/retention programs will build the capacity of highly-qualified research personnel within AHS.**
- **We envisage a culture of collaboration and knowledge sharing to effect changes in policy and practice in health care.**
- **Our staff, at all organizational levels, will be enabled and encouraged to apply research and evaluation skills, including web-based tools, to facilitate evidence-based practice.**
- **We will also strive to attract and retain world-class health researchers and clinician scientists in all health professions.**
- **And we are currently working to recruit a senior vice-president of Research and Academic Partnerships.**
- **The successful candidate will be responsible for an integrated research portfolio that produces advances in clinical, translational, health services and public health research—and will also co-ordinate the efforts and ingenuity of every innovator in our health-care system.**
- **While this position follows a provincial mandate, the advances in the research it generates could have a far-reaching impact—an impact that spreads across Canada, and perhaps the world.**

- **As an organization, we need to sit down and talk about what our aspirations are, what's achievable and how we get there. We want to nurture and encourage the creativity and pursuit of innovation as we work toward our research goals - all in the name of improving the health of Albertans.**
- **We must also manage the responsible and appropriate circulation of health-care technology, taking into account opportunity cost, clinical effectiveness and cost effectiveness.**
- **To that end, we have developed a Health Technology, Assessment, Appraisal and Innovation plan. To keep things simple, let's just call it "HTA appraisal and innovation." I know I'm bombarding you with acronyms today, but bear with me.**
- **This plan will be implemented to improve the access, quality and sustainability of the health care system for Albertans.**
- **The goals of our HTA appraisal and innovation plan are to:**
 - **standardize the AHS approach to the diffusion of health technologies**
 - **account for opportunity cost and effectiveness (clinical and cost) of health technologies being considered for**

introduction

- **integrate with our financial budgeting cycles, strategic planning and research agenda**
 - **stimulate the uptake of innovative technologies which are proven effective**
 - **identify health care interventions for trial for which the evidence of effectiveness is promising but uncertain, and**
 - **identify health care intervention**
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- **Innovative research and development must be done to bring new technologies to the realm of health services. Evaluations of the evidence for effectiveness are done by groups like the Institute of Health Economics and universities in Alberta, the Canadian Agency for Drugs and Technology in Health, or private firms.**
 - **Quality, innovation and economic restraint are important in health care and while there are many methods to assess the quality and economic impacts of health technologies, only a few address assessment of innovations.**
 - **Therefore, we need to develop a structure to identify health-care innovations and a strategy to assess them. There are many**

supporters in Alberta to help collectively stimulate innovation in AHS.

- In order to effectively and prudently manage the innovation opportunities in AHS it will be necessary to introduce, develop and maintain structures, processes, policies and practices that will manage the innovation efforts to the greatest benefit of Albertans.
- To help advance the innovation efforts, we will consult stakeholders such as universities, Advanced Education and Technology, Alberta Health and Wellness, Alberta Health Solutions, Alberta Technology Futures, TEC Edmonton, Calgary Innovates and other members of business and industry.
- I'd also like to touch on the Strategy for Patient-Oriented Research that was developed by the Canadian Institute of Health Research.
- I'm not going to get into all of the specifics, but the core of the strategy is based on the development of stronger research facilitation strategies through Support for People and Patient-Oriented Research and Trials Units—otherwise known as SUPPORT units. Yes, there's one more acronym for you. But it's the last one, I promise.
- Now, these SUPPORT units are intended to:

- **support leading-edge patient-oriented researchers and programs;**
 - **educate and support health-care professionals and their respective communities who wish to evaluate aspects of care and develop new research programs; and**
 - **implement the standards for research involving research participants.**
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- **SUPPORT units will typically house multidisciplinary teams to help investigators design relevant research, conduct biostatistical analyses, manage data and meet the highest regulatory standards.**
 - **They will be integrated into clinical or care settings to be readily accessible to support a wide spectrum of research and integrated knowledge translation activities.**
 - **In this strategy, the SUPPORT units will be housed in academic health science centres or health authorities. For example, each hospital or community care setting served by a SUPPORT unit would have timely access to resources and personnel.**
 - **To address concerns about developing research along a full continuum of care, SUPPORT units will be provided with resources to link to family physician practices so that they can collaborate on research initiatives.**

- **Earlier in my speech, I mentioned how we envision a culture of collaboration and knowledge sharing to effect changes in policy and practice in health care. The strategy put forward by Canadian Institute of Health Research falls perfectly in line with our goals, and has our full support. I look forward to collaborating with the Canadian Institute of Health Research and other stakeholders to bring this strategy into practice.**
- **There is another area where many different agencies can collaborate to improve the health outcomes of Albertans. An innovation I haven't talked about—and something that happens to be one of our biggest challenges—is enabling individuals and communities to be as healthy as possible. They need to be able to influence and take control of the factors in their life that impact their health. Things like shelter, education, food, and income—the determinants of health.**
- **Alberta Health Services plays a large part in enabling Albertans to accomplish this, but we can't do it alone. What it takes is interaction between public services at all levels. Working with other Ministries, social institutions, the not-for-profit sector and municipalities across the province to address these issues.**
- **Everyone has a role to play. From not-for-profit employment agencies helping people find work, to municipalities building walkable neighborhoods so people are encouraged to walk, not drive, from place to place. If the public sector—including Alberta**

Health Services—seeks opportunities to help Albertans to manage their own health, there will be less reliance on the health-care providers. This would be a big step toward ensuring the sustainability of the health-care system.

- **In terms of research in this area, we need to find evidence to support health promotion efforts in the areas of how building and using community capacity leads to prevention of chronic disease; how multifaceted versus single intervention approaches optimize the opportunity to influence change; the impact of urban and natural environments on health, including eating and activity patterns; and how health promotion can be best implemented to change behaviour with eating and activity patterns and other risk factors that can lead to chronic disease.**
- **To conclude today's talk, you may have noticed that a common theme has emerged today — collaboration. Through the shared use of innovation, research and technology in the hands of the best and brightest minds, Alberta will build a health-care system that will be recognized as the best in the world.**
- **Thank you again for inviting me here today, and I look forward to answering any questions you may have.**