FOR THE RECORD

World Health Organization reforms forthcoming

Consensus on the need to reform World Health Organization (WHO) operations and financing, a new strategy to combat HIV and approval of a comprehensive influenza preparedness plan were among developments emerging from the 64th World Health Assembly in Geneva, Switzerland.

Delegates from 192 member states approved a budget of nearly US\$4 billion for the WHO in 2012–13 after being apprised of the findings of an internal WHO report which indicates that the international agency will likely have a severe funding shortfall in 2011 — possibly topping US\$1 billion — but is crafting the broad parameters of a strategy to handle its financing woes.

“Many were disappointed by the lack of detail in the Secretariat’s [financial reform] report, while others understood this as a first broad sketch. This was the intention,” WHO Director-General Margaret Chan said in her closing address to the May 16–24 assembly (www.who.int/dg/speeches/2011/wha_20110524/en/index.html). “As I stated many times, the reform process must be a collaborative effort, driven by Member States. Had I come to you with fully detailed, pre-cooked plans, I would have defaulted on my promise. I had a sense that you were comfortable with some general principles. You want a step-by-step approach, but you want all reforms to come together as a coherent package.”

“You want a number of managerial and administrative reforms, such as a streamlined, more realistic budget that works as an accountability tool. You want reforms that make it easier to measure the impact of investments. You want greater transparency and alignment of work at all levels of the Organization. And you want this to

happen now. Many welcomed the proposed independent evaluation of WHO, and several suggested that work on the strengthening of health systems would be a good focus for evaluating WHO capacities and gaps,” Chan added.

Among austerity measures proposed by the secretariat which crafted the *Implementation of Programme budget 2010–2011: interim report* (http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_5-en.pdf) that was presented to the assembly were:

- “limiting further growth in staff numbers
- implementing structural changes, including the disestablishment of the headquarters cluster for partnerships, country focus and United Nations reform, the closure of the WHO offices at the World Bank and in Washington DC; merging of departments at headquarters and in regions; and the devolution of several regional centres back to the host government
- rationalizing travel costs: reducing the number of external meetings, and the need to travel generally, by increasing teleconferences and virtual meetings; scheduling back-to-back meetings; and limiting staff travel to necessary trips
- reducing printing charges by limiting publication in hard copy to high-priority publications, and publishing electronically where feasible
- outsourcing work and exercising selectivity in the choice of contractors
- working more closely with partners to make efficient use of combined human resources
- reducing the number of agreements for performance of work by maximizing the expertise of existing staff
- considering increasing the use of WHO collaborating centres in order to deliver results
- establishing clear, unambiguous benchmarks and targets for measuring efficiency at different stages in the biennial implementation cycle.”

Among other measures, the 64th assembly approved a *Global Health Sector Strategy on HIV/AIDS, 2011–2015* which the WHO says could prevent over 4.2 million HIV infections and save 2 million lives between 2011–2015 (http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_15-en.pdf).

“The main themes across all activities are: improving the efficiency and effectiveness of HIV responses, better integrating HIV programmes with other health programmes, supporting the strengthening of health and community systems, improving health access and equity, and ensuring that the health sector informs broader multisectoral responses, such as legal and policy reform,” the strategy states.

The assembly also officially approved a framework for pandemic preparedness that will oblige member states to share influenza samples with human pandemic potential (www.cmaj.ca/lookup/doi/10.1503/cmaj.109-3902). Under the framework, member states must make flu samples readily available to WHO-affiliated national laboratories and surveillance centres. In exchange, developing countries that lack the capacity to manufacture vaccines, diagnostics and pharmaceuticals will be provided greater access to such materials when they are developed in other nations. — Wayne Kondro, CMAJ

Colorectal cancer screening rates lagging

As many as 15 000 Canadian lives could be saved over the next decade if Canadians over the age of 50 were screened every two years with a fecal occult blood test, according to the Canadian Cancer Society.

Although an estimated 8900 Canadians will die of colorectal cancer in 2011, only about 32% of those aged 50 and over are screened every two years

with either a fecal occult blood test or a fecal immunochemical test, as recommended by guidelines, the society says in a special colorectal cancer component of its annual report on the incidence of cancer in Canada.

A projected 22 200 new cases of colorectal cancer will be diagnosed in Canada in 2011, according to the report, *Canadian Cancer Statistics 2011* (www.cancer.ca/Canada-wide/About%20cancer/~media/CCS/Canada%20wide/Files%20List/English%20files%20heading/PDF%20-%20Policy%20-%20Canadian%20Cancer%20Statistics%202011%20-%20English.ashx).

The report, which is produced in collaboration with the Public Health Agency of Canada and Statistics Canada, also notes that the colorectal cancer incidence and mortality rates for those aged 55–74 are 60% higher for men than women, and that there are significant interprovincial differences in both rates, “which are likely due in part to differences in diet and physical activity.”

“Among the provinces, there is an east-west gradient, with highest rates generally in the Atlantic Provinces (especially Newfoundland and Labrador) and lowest rates in British Columbia and Alberta. The range of rates is striking and is considerably greater than for any other major cancer, with the highest mortality rate nearly double the lowest.”

The report concludes that reductions in the burden of colorectal cancer will require:

- “continued emphasis on screening, which provides an important opportunity to reduce mortality and likely incidence. More specifically, there is a need to maximize recruitment, participation and retention in screening programs as well as enhance their quality. Although Canadians appear to be generally aware of colorectal cancer screening since they recognize that screening tests exist and realize the value of being screened, there is a lack of knowledge about fecal occult blood testing and a belief that screening is linked to symptoms.
- more research into the modifiable

risk factors for colorectal cancer and effective prevention

- continued dissemination of optimal therapies and development and testing of new therapeutic regimens
- ongoing efforts to ensure consistent and standardized follow-up management.”

Other findings of the report include:

- In 2011, an estimated 177 800 cases of cancer will be diagnosed and 75 000 deaths from cancer will occur in Canada.
- The five-year relative survival ratio for all cancers is 62%. The ratios are highest for thyroid, prostate and testicular cancers. They are lowest for lung, esophagus and pancreatic cancers.
- 45% of men and 40% of women in Canada will develop cancer during their lifetimes.
- Lung cancer causes 27% of all cancer deaths. — Wayne Kondro, *CMAJ*

OECD urges more comprehensive long-term care strategies

Nations must develop more comprehensive strategies to provide long-term care as a result of increasing demand arising from aging societies, according to the Organisation for Economic Co-operation and Development (OECD).

“It will require a comprehensive approach covering both policies for informal (family and friends) carers, and policies on the formal provision of LTC [long-term care] services and its financing. Often, policy attention focuses excessively on paid care systems. Less attention is given to the interaction with informal and private structures,” the OECD states in a new report, *Help Wanted? Providing and Paying for Long-Term Care* (www.oecd.org/document/23/0,3746,en_2649_37407_47659479_1_1_1_37407,00.html).

The growing burden is a function of both demographics and societal changes, the report states. “With population ageing, no clear signs of a reduction in disability among older people, family ties becoming looser and grow-

ing female labour-market participation, it is not surprising that the need for care for frail and disabled seniors is growing. Growth in older age cohorts is the main driver of increased demand for long-term care across OECD countries. Indeed, policy discussion around long-term care reforms is often framed in the context of pressures arising from ageing societies. The statistics speak for themselves. In 1950, less than 1% of the global population was aged over 80 years. In OECD countries, the share of those aged 80 years and over is expected to increase from 4% in 2010 to nearly 10% in 2050.”

The report argues that nations need to upgrade their systems to better support both long-term care workers and family caregivers, who provide the bulk of care in most countries. Many countries also need to follow the lead of nations like Canada and Australia by extending work permits to caregivers as part of their immigration quotas.

Many countries must also find a better balance between the support provided to institutional care and care provided at home. About 62% of spending on long-term care issues for institutional care, yet 70% of patients are provided care at home. Among cost-effective policies that should be pursued are the provision of more respite care, greater use of part-time care and expansion of benefits to family carers, so as to reduce the demand for more expensive institutional care, the report adds.

“Without support, high-intensity care-giving is associated with a reduction in labour supply for paid work, a higher risk of poverty and a 20% higher prevalence of mental health problems among family carers than for non-carers,” the report states.

The report also argues that there must be improved pay and working conditions for institutional care providers. “Difficult working conditions and low pay often generate high turnover among workers, contributing to producing a negative image of LTC, and endangering both access to, and quality of, services.”

Financing of long-term care must also be reformed in many nations, the report adds, arguing that policies should reconcile access to care with

costs. A move toward universal long-term care benefits is desirable for access purposes, even for people relatively well off, it states. The average long-term care costs “can represent as much as 60% of disposable income for all those in the bottom 60% of the income distribution.” While acknowledging the need to constrain costs, the report states that OECD countries should target benefits to where they are needed most, develop forward-looking financing policies and develop new financial instruments, such as bonds and insurance policies, to pay for lodging costs associated with long-term care.

The report also indicates there is need for more evidence-based science regarding the entire spectrum of long-term care. “Efficiency discussions in long-term care have thus far received relatively little attention and better evidence on what works and under what conditions is needed.”

The OECD study indicates that there is widespread variation in long-term care policies and services provided among 31 member states. For example, “spending on long-term care, which now accounts for 1.5% of GDP [gross domestic product] on average across the OECD, will rise accordingly. Sweden and the Netherlands today spend the most, at 3.5% and 3.6% respectively of GDP, while Portugal (0.1%), the Czech Republic (0.2%) and the Slovak Republic (0.2%) spend the least,” the OECD states in a press release (www.oecd.org/document/12/0,3746,en_21571361_44315115_47904908_1_1_1,00.html).

The report also provides key long-term care statistics for member states. In the case of Canada (www.oecd.org/dataoecd/60/56/47877490.pdf), those include:

- “In 2010, about 13 % (OECD average 15%) of Canada’s population is aged over 65 and about 3.5 % (OECD average 4%) over 80.
- In 2006, Canada’s expenditure on long term nursing care was equivalent to about 1.5 % of its gross domestic product (GDP). More than 80 % of these expenditures were targeted to institutional care (OECD Health Data, 2010).

- In 2008-09, about 0.7 % (250,000 individuals) of the Canadian population resided in an institution, of which about 75 % were 65 years and older. The 238,000 individuals are equivalent to about 4 % of the population over 65.
- In 2008-09, there were approximately 4 850 residential care facilities across Canada with 270 000 approved beds. Of these beds, about 217 000 were approved for homes for the aged (Statistics Canada, 2008-2009).
- In 2006, more than 2.5 % (875,000 individuals) of the population reported receiving home health care and home support; about 60 % of this group received home health care only (CIHI, 2007).
- In 2006, about 160,000 nurses and personal carers worked in the long-term care (LTC) sector on a full-time basis and close to 70,000 on a part-time basis (OECD Health Data, 2010 based on Census 2006)."

The country profiles also indicate that the long-term care market is relatively small in Canada. In 2007, roughly 1% of the population subscribed to long-term care insurance, according to data culled from Canadian Life and Health Insurance Association Inc.. The profile also indicates that about one-fifth of Canadians aged 45 and older provided some form of unpaid care to seniors with long-term care health problems in 2007. As well, family and friends were estimated to provide more than 80% of care needed by people with long-term conditions in 2007, according to Statistics Canada data. — Erin Walkinshaw, Ottawa, Ont.

GlaxoSmithKline to make investments in health infrastructure within developing nations

Pharmaceutical giant GlaxoSmithKline has confirmed that it will reinvest one-fifth of its profits from drug sales in developing nations back into those countries' health care systems.

Some £3.5 million, or 20% of the profits that GlaxoSmithKline garnered in 2010 from drug sales in the world's least developed nations, will be available for reinvestment this year, the company said (www.gsk.com/media/pressreleases/2011/2011-pressrelease-436669.htm).

The money will be used to train and support health care workers, with each country receiving a share proportional to the amount of profit the firm generated within its borders. Each country, though, will receive a minimum investment of £10 000.

The company has also joined with three leading nonprofit organizations — AMREF (African Medical and Research Foundation) in East and South Africa, Save the Children in West Africa, and CARE International UK in Asia Pacific — to distribute the funds.

Although the investment is “relatively small,” the commitment “provides a sustainable model to help improve health care infrastructure,” CEO Andrew Witty said in the press release.

It's the fulfillment of a promise the company made in 2009 to reinvest its profits from developing countries to improve health care, along with a spate of other feel-good initiatives, including reducing drug prices in developing countries to a quarter of their cost in the United Kingdom and opening its “patent pool” to other researchers in a bid to boost the development of drugs for orphan diseases (www.gsk.com/responsibility/cr-report-2010/access-to-medicines/flexible-pricing/least-developed-countries.htm).

GlaxoSmithKline currently supplies medicines to 37 of the 38 least developed countries in the world so the move will likely bolster goodwill toward the firm within Africa, which represents a growing market for pharmaceuticals.

Projects include expanding a group of nurse-run clinics in Rwanda to improve access to basic health care and the renovation of a clinical training centre for midwives in Cambodia.

New projects will also begin shortly in Rwanda, Ethiopia and the Democratic Republic of Congo, and funding for future projects has also been authorized

in Yemen, Niger, Sierra Leone, Angola, Zambia, Bangladesh, Nepal and Cambodia. — Lauren Vogel, *CMAJ*

Budget redux

As expected, the federal government's post-election budget contained no additional health measures as Conservative Finance Minister Jim Flaherty tabled an updated blueprint June 6 for fiscal 2011/12 (www.budget.gc.ca/2011/plan/Budget2011-eng.pdf).

But Flaherty's plan reaffirmed election campaign promises to expedite efforts to bring the federal deficit into the black by 2014/15, a year earlier than the Conservative government originally proposed. To that end, the government will undertake a strategic and operating review over the course of the coming year to identify \$4 billion in cuts, or about 5% of government spending.

Beyond that, Flaherty reintroduced measures originally unveiled in a federal budget (www.cma.ca/lookup/doi/10.1503/cma.109-3845), last March, shortly before the government fell and Canadians were sent to the polls.

The reintroduced measures included:

- Forgiveness of student loans up to \$40 000 for family physicians, and up to \$20 000 for nurses and nurse practitioners, if they choose to work in underserved rural and remote areas for a period of time (the duration of which has not yet been determined).
- A \$2000 family caregiver tax credit for people caring for family members with mental or physical infirmities. The credit is reduced by 15% for every dollar earned or received by recipient of care.
- Removal of the \$10 000 limit on the amount caregivers are eligible to claim under the medical expense tax credit.
- Inclusion of certification fees, including those for medical students, under the tuition tax credit.
- \$3 million to help develop "community-integrated palliative care models."
- A \$1.5-billion increase in federal transfer payments to the provinces for health and social programs, increasing the total in 2011–12 to \$38.7 billion.

- \$53.5 million over five years to help create 10 new Canada Excellence Research Chairs.
- \$100 million for a brain research fund, intended to support neuroscience, foster collaborative research and accelerate the pace of discovery.
- \$12 million over five years for a competition to select a Canada-India Research Centre of Excellence.
- \$405 million to Atomic Energy of Canada Ltd. to cover commercial losses and to ensure a secure supply of medical isotopes.
- \$4 million over three years to help construct a cyclotron for the production of medical isotopes in Thunder Bay, Ontario.
- \$65 million for Genome Canada for operating costs and to "launch a new competition in the area of human health."
- An additional \$100 million over five years to the Canadian Food Inspection Agency to improve food inspection capacity.
- \$24 million to extend the Initiative for the Control of Diseases in the Hog Industry for two more years.
- An additional \$10 million for universities to cover the indirect costs of research, such as facility maintenance and knowledge transfer. — Roger Collier, *CMAJ*

Marijuana dispensaries propose self-regulation

The private sector, it seems, is not always the favoured solution of the Conservative government.

The newly minted Canadian Association of Medical Cannabis Dispensaries (CAMCD) is proposing that it become the national certifier of medical marijuana suppliers but Health Canada, it appears, is balking at the notion.

The association argues that a national certification system for dispensaries across Canada is "a viable solution to Health Canada's failed medical marijuana program" (www.camcd-acdcm.ca).

"We want to relieve the government of this burden. Dispensaries are a cost-effective alternative health care delivery option. Our model offers better quality

medicine, better support for patients and provides a solution to all these expensive court cases," Marc-Boris St. Maurice, a founding director of CAMCD and president of the Montreal Compassion Center in Quebec, said in the press release.

The association represents over 20 000 patients who access marijuana compassion clubs to obtain the drug for relief from a range of ailments including HIV/AIDS, cancer, arthritis and multiple sclerosis.

But the offer to become a national certifier of marijuana suppliers did not sit well with Health Canada.

"Health Canada does NOT license organizations such as 'compassion clubs' to possess, produce, or distribute marihuana for medical purposes," Health Canada spokesperson Gary Holub writes in an email.

Holub added that Health Canada has the authority to approve whether or not an individual is legally entitled to possess small amounts of medicinal marijuana, provided that has been recommended by a physician. Through provisions in the Marihuana Medical Access Regulations (MMAR), Health Canada limits the number of marijuana production licences to "four in one location," and limits to two the number of people for whom a grower can produce the weed.

"Any production operations which exceed these limits would operate outside the MMAR and therefore be subject to law enforcement measures," Holub writes.

But Holub added that Health Canada is currently considering measures to reform its access program. "In its considerations, the Department is focusing on three key objectives: public health, safety and security; providing access to marihuana for medical purposes; and examining the overall costs to Health Canada. Any changes to the Program will balance the need to provide reasonable legal access to this controlled substance with the Government's responsibility to regulate it."

CAMCD argues that reform of federal law is needed to ensure that medical marijuana patients have adequate access to the drug. As well, the association argues that the cost of marijuana should be "covered by provincial health authorities"

(www.camcd-acdcm.ca/about-mission).

The association vows on its website that if it were given authority to certify medicinal marijuana suppliers, the operations of all dispensaries would be transparent, accountable and adhere to best practices.

“We look forward to working with law enforcement, patient and health care provider groups, different levels of government and other stakeholders,” in developing a national supply system, Rade Kovacevic, a founding director of CAMCD and director of the Medical Cannabis Centre of Guelph Inc. in Ontario, said in the press release. “We want to seize this opportunity to bring medical marijuana out of the legal grey zones and constitutional quagmires, and into the light of a well-regulated, accountable industry that can fully meet the needs of the many thousands of patients who benefit from this medicine.”

Several court cases have questioned the efficacy of the federal medical marijuana program in ensuring that medical marijuana users have adequate access to the drug.

The federal government was instructed by the courts as early as the year 2000 to revise its marijuana laws and regulations to ensure that medicinal users have access (*CMAJ* 2000;163:581).

The government developed the MMAR in response and sought to itself become the nation’s marijuana supplier by growing the weed in an abandoned mine shaft in Manitoba. But the variety of marijuana grown by the government was deemed inappropriate for users and in the interval, an array of private growers stepped into the void, often establishing themselves as compassion clubs.

In the most recent court decision regarding medicinal marijuana, the Ontario Superior Court of Justice ruled that federal marijuana regulations, as well as certain sections contained in the Controlled Drugs and Substances Act, were “constitutionally invalid and of no force and effect” (www.canlii.org/en/on/onsc/doc/2011/2011onsc2121/2011onsc2121.html).

Justice D.J. Taliano also noted in his decision that the “overwhelming refusal” of Canadian physicians to participate in the medicinal marijuana pro-

gram “completely undermines the effectiveness of the program.” He added that “the legislation requires physicians to endorse the use of an untested drug in the absence of any of the typical safeguards that would normally accompany such an act. It can hardly be said the failure of the medical profession to wholeheartedly undertake this task is the fault of anything other than the legislation which forced it upon them.”

Taliano also urged more education and training for physicians on the medicinal use of marijuana so they can safely prescribe the drug without liability. Parliament should establish those training parameters in “meaningful consultation with physicians and their professional associations,” the judge added. — Erin Walkinshaw, Ottawa, Ont.

Oversight of medical device safety and effectiveness remains inadequate

More than five years after being chastised for inadequate oversight of the 1.4 million medical devices now on the Canadian market, Health Canada is still failing to meet its legislative and regulatory obligations in the sector, the office of the Auditor General of Canada says.

“Overall, Health Canada has made unsatisfactory progress toward meeting commitments it made in response to recommendations in our 2004 and 2006 reports,” interim Auditor General John Wiersema states in chapter six of the *2011 June Status Report of the Auditor General of Canada* (www.oag-bvg.gc.ca/internet/English/parl_oag_201106_06_e_35374.html).

“Although it has accomplished much in some areas, the Department is not meeting its obligations under the Medical Devices Program, mostly at the pre-market stage. For example, more than 45 percent of the time it does not meet its service standards for timely review of medical device submissions, thus delaying Canadians’ access to the health benefits of these devices. According to Health Canada, this problem is due to a funding shortfall caused in part by rapid

growth in medical device technology and increasingly complex submissions.”

The audit also identified substantial deficiencies in Health Canada’s inspection of manufacturing facilities, its review of incident reports (of which, there were 4867 in fiscal 2009/10), its surveillance of safety and effectiveness of devices, and its communications to the public about the risks associated with the use of devices. While Health Canada spent \$10.1 million on the direct costs of administering the Medical Devices Program in fiscal 2009/10, and an additional \$9.7 million on indirect costs, the department indicated it could not meet the program requirements it had chosen to meet because of a \$4.2-million funding shortfall. The department also indicated that it would require \$61.1 million per year to meet all obligations under the program.

Other findings of the Auditor General’s re-examination of Health Canada’s oversight of the Medical Devices Program included:

- “Health Canada does not know if it has allocated too much or not enough resources to post-market activities such as inspections and surveillance. The Department has not established what levels of activity are needed to protect the health and safety of Canadians. In addition, while the Department has identified risks associated with medical devices already available on the Canadian market, it has yet to determine whether the risks that the inspections and the review of incident reports are designed to address have been adequately mitigated.
- Health Canada recently developed strategies to increase cooperation at the pre-market stage with regulatory bodies in other countries. While we acknowledge the significant challenges involved, progress to date is unsatisfactory. The work has not taken advantage of foreign resources, information, and knowledge and has not yet improved regulatory performance.
- Health Canada has taken significant actions to meet some commitments made in response to other recommendations from previous reports. A major accomplishment was making the Medical Devices Program more sustainable

than in previous years. The Department increased its funding to the Program and expects to eliminate the remaining funding shortfall by implementing new user fees starting in the 2011–12 fiscal year. Another significant accomplishment has been establishing a national inspection program to assess compliance with the Food and Drugs Act and Regulations. The Department also increased its capacity to identify safety risks associated with medical devices on the market.”

In response, Health Canada stated that it “agrees with all of the recommendations” of the Auditor General. Remedial plans include the establishment and implementation of a “more risk-based inspection cycle” in fiscal 2012/13, as well as the introduction of performance standards for postmarket surveillance and the development of a “plan to enhance the effectiveness of risk communications” in fiscal 2011/12. — Wayne Kondro, *CMAJ*

Globe’s one billion disabled people often marginalized

More than one billion people, or about 15% of the world’s population, are living with some form of disability, including 190 million who suffer from a “severe” disability, according to the first *World Report on Disability*.

The report, produced jointly by the World Health Organization (WHO) and the World Bank, also projects that the number of people suffering from disabilities will increase because of demographic trends (http://whqlibdoc.who.int/publications/2011/9789240685215_eng.pdf). “There is a higher risk of disability at older ages, and national populations are growing older at unprecedented rates. There is also a global increase in chronic health conditions, such as diabetes, cardiovascular

diseases, and mental disorders, which will influence the nature and prevalence of disability.”

“Disability is part of the human condition,” WHO Director-General Dr. Margaret Chan said in a press release. “Almost every one of us will be permanently or temporarily disabled at some point in life. We must do more to break the barriers which segregate people with disabilities, in many cases forcing them to the margins of society” (www.who.int/disabilities/world_report/2011/press_release.pdf).

The report notes that people with disabilities experience poorer health, lower educational achievements, fewer economic opportunities and higher rates of poverty. It also identifies eight barriers that prevent the disabled from achieving full participation in society.

Those include “inadequate” policies and standards, such as “a lack of clear policy of inclusive education, a lack of enforceable access standards in physical environments, and the low priority accorded to rehabilitation.”

For example, a review of 28 countries “participating in the Education for All Fast Track Initiative Partnership found that 10 had a policy commitment to include children with disabilities and also had some targets or plans on such issues as data collection, teacher training, access to school buildings, and the provision of additional learning materials and support ... while a further 13 countries mentioned disabled children they provided little detail of their proposed strategies and five countries did not refer to disability or inclusion at all.”

People with disabilities also often suffer from deficiencies in health care and rehabilitation services, or must deal with “negative attitudes” from health care workers, teachers, employers and family members. Other barriers include problems with service delivery, inadequate funding and lack of access to public infrastructure such as transportation.

To redress the deficiencies in support for the disabled, the report recommends that governments pursue nine measures:

- “Enable access” to education, health care, employment and social services.
- “Invest in specific programmes and services” for the disabled such as “rehabilitation, support services, or training.”
- “Adopt a national disability strategy and plan of action.”
- “Involve people with disabilities ... in formulating and implementing policies, laws, and services.”
- Improve the training of teachers, health care workers and others to ensure that they are not discriminatory toward the disabled.
- “Provide adequate funding and improve affordability” for disabled support programs.
- “Increase public awareness and understanding” by developing such programs as ones aimed at reducing discrimination.
- “Improve disability data collection.”
- “Strengthen and support research on disability.”

Other highlights of the report included a compelling foreword crafted by physicist Stephen Hawking, who suffers from motor neurone disease. Governments can no longer overlook people with disabilities, “who are denied access to health, rehabilitation, support, education and employment, and never get the chance to shine,” Hawking wrote. “We have a moral duty to remove the barriers to participation for people with disabilities and to invest sufficient funding and expertise to unlock their vast potential. ... It is my hope this century will mark a turning point for inclusion of people with disabilities in the lives of their societies.” — Erin Walkinshaw, Ottawa, Ont.

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