



## Press Information

### Philips and Grand Challenges Canada sign agreement to help address childhood pneumonia deaths

- *A unique co-investing collaboration will scale up distribution of the Philips Children's Automated Respiration Monitor, a device specifically developed for use in low-resource settings throughout the world;*
- *The Philips Children's Automated Respiration Monitor, automatically detects the breathing rate of a child, helping community health workers diagnose fast breathing, a key vital sign in diagnosing pneumonia;*
- *Pneumonia is the leading cause of death among children under the age of five.<sup>1</sup>*

**Copenhagen, Denmark** – On the occasion of the [Women Deliver Conference 2016](#), [Royal Philips](#) (NYSE: PHG, AEX: PHIA) and [Grand Challenges Canada](#), funded by the Government of Canada, have announced the signing of an agreement to scale an innovation to improve the diagnosis of childhood pneumonia in low resource countries. Philips and Grand Challenges Canada have signed a repayable grant agreement to scale the manufacturing and distribution of the Philips Children's Respiration Monitor (also known as ChARM) to make it affordable and accessible for community based health workers in low-resource settings throughout the world.

ChARM has the potential to assist community health workers in establishing a more accurate measurement of a sick child's breathing rate to help improve the diagnosis of pneumonia and potentially prevent some of the 922,000 childhood deaths caused by pneumonia each year<sup>1</sup>.

Pneumonia remains the leading infectious cause of death among children under-five, killing nearly 2,500 children a day<sup>1</sup>. With most victims under two years of age, the vast majority of deaths occurs in low-resource settings in developing countries, where treatment is not readily available for many children. UNICEF and the World Health Organization (WHO) have made pneumonia a focus area in efforts to reduce child mortality.

"As a leading health technology company, Philips' vision is to improve people's lives through meaningful innovation", said Dr. Maarten van Herpen, Head of the [Philips Africa Innovation Hub](#). "Equitable innovation strategies can help drive sustainable solutions that bridge the divide between the privileged and lesser privileged sections of society, to improve the quality of life for all. Thanks to collaborations and co-investments like the one we have signed with Grand Challenges Canada, companies such as Philips can scale innovations that reach an underserved population and thereby integrate the [United](#)

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<sup>1</sup> WHO Fact sheet no.331 <http://www.who.int/mediacentre/factsheets/fs331/en/>

[Nations Sustainable Development Goal 3 - ensure healthy lives and promote well-being for all at all ages](#), into their core business strategies.”

The development of ChARM is part of the commitment made in [Philips' pledge](#) to the [Every Woman Every Child](#) movement. In this pledge, Philips aims to develop and deploy innovations that enable access and improve quality of care for mothers and their children in low-resource settings. The promotion and scaling of such innovations is important to accelerate the implementation of the [UN Global Strategy for Women's Children's and Adolescents' Health](#) in support of the Sustainable Development Goals.

Grand Challenges Canada is collaborating with Philips to invest in ChARM in response to the global call for innovation to prevent and treat pneumonia, a leading cause of death among children under five<sup>2</sup>. The CA\$602,000 repayable grant, matched by Philips, will finance the market launch of ChARM and support the development of the next generation of the device which is planned to include pulse oximetry. The agreement also aims to ensure global access in low- and middle-income countries.

Commenting on today's announcement, Dr. Peter A. Singer, Chief Executive Officer of Grand Challenges Canada said “Pneumonia is a killer of children especially in the developing world. ChARM responds to a crucial need to reduce deaths from childhood pneumonia. By collaborating with a large company such as Philips, we can help innovations to reach millions. ”

### **The potential to reach over 100 million children a year**

One important aspect in diagnosing pneumonia is monitoring a child's breathing rate. In the developing world, community health workers count how many breaths a child takes in the span of a minute to detect and diagnose the condition. But achieving an accurate count can be difficult, as shallow breaths are hard to detect, children often move around and there may be distractions and other checks to perform.



The Philips ChARM is strapped around a child's chest, without requiring direct skin contact. It delivers an accurate and reliable breathing rate measurement by converting chest movements detected by accelerometers into an accurate breathing count, using specially developed algorithms. The monitor not only provides quantitative feedback, but also qualitative feedback to the healthcare provider based on the World Health Organization's IMCI<sup>3</sup> (Integrated Management of Childhood Illness) guidelines to diagnose fast breathing rates, which is one of the key vital signs to diagnosing

pneumonia.

The Philips ChARM is being developed for low-resource settings: the device will be dustproof, water-splashing proof and can be used in extreme temperatures.

The long-lasting battery will make it power independent, suitable for areas without electricity. It will be small and easily portable for use in community and clinical settings. The user interface is pictogram-based, designed to be intuitive and easy to use, suitable for providers with low literacy.

<sup>2</sup> WHO/UNICEF: Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD) - [http://www.who.int/maternal\\_child\\_adolescent/news\\_events/news/2013/gappd\\_launch/en/](http://www.who.int/maternal_child_adolescent/news_events/news/2013/gappd_launch/en/)

<sup>3</sup> WHO IMCI Handbook: <http://apps.who.int/iris/bitstream/10665/42939/1/9241546441.pdf>

In the hands of community health workers, the Philips ChARM has significant potential to save and improve lives. At scale, over 100 million children per year could receive more accurate pneumonia diagnosis support with ChARM, based on the potential projected by Philips

Field testing on the Philips ChARM was conducted in East Africa and India from which improvements in design and technology were incorporated on the basis of feedback from community health workers and clinical officers in these low-resource settings.

The Philips Children's Respiration Monitor is pending CE-marking and is expected to become commercially available from the third quarter of 2016.

**For further information, please contact:**

Radhika Choksey

Philips Group Communications - Africa

Tel: +31 62525 9000

E-mail: [radhika.choksey@philips.com](mailto:radhika.choksey@philips.com)

**Liam Brown**

Press Officer

Grand Challenges Canada

T. 416.673.6542 / 647.328.2021

[liam.brown@grandchallenges.ca](mailto:liam.brown@grandchallenges.ca)

**About Royal Philips**

Royal Philips (NYSE: PHG, AEX: PHIA) is a leading health technology company focused on improving people's health and enabling better outcomes across the health continuum from healthy living and prevention, to diagnosis, treatment and home care. Philips leverages advanced technology and deep clinical and consumer insights to deliver integrated solutions. The company is a leader in diagnostic imaging, image-guided therapy, patient monitoring and health informatics, as well as in consumer health and home care. Philips' wholly owned subsidiary Philips Lighting is the global leader in lighting products, systems and services. Headquartered in the Netherlands, Philips posted 2015 sales of EUR 24.2 billion and employs approximately 104,000 employees with sales and services in more than 100 countries. News about Philips can be found at [www.philips.com/newscenter](http://www.philips.com/newscenter).

**About Grand Challenges Canada**

Grand Challenges Canada is dedicated to supporting Bold Ideas with Big Impact® in global health. We are funded by the Government of Canada and we support innovators in low- and middle-income countries and Canada. The bold ideas we support integrate science and technology, social and business innovation – we call this Integrated Innovation®. Grand Challenges Canada focuses on innovator-defined challenges through its Stars in Global Health program and on targeted challenges in its Saving Lives at Birth, Saving Brains and Global Mental Health programs. Grand Challenges Canada works closely with Canada's International Development Research Centre (IDRC), the Canadian Institutes of Health Research (CIHR) and Global Affairs Canada to catalyze scale, sustainability and impact. We have a determined focus on results, and on saving and improving lives.

[www.grandchallenges.ca](http://www.grandchallenges.ca)