



## PERIPHERAL VASCULAR DISEASE

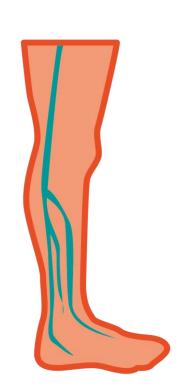
#### FACTS AND FIGURES

#### SIGNS AND SYMPTOMS INCLUDE<sup>1,2</sup>

PAINFUL LEG CRAMPING

SKIN CHANGES LIKE SHINY SKIN, DECREASED SKIN TEMPERATURE **WEAK PULSES IN THE LEGS AND FEET NUMBNESS, WEAKNESS, OR HEAVINESS IN MUSCLES** SORES OR ULCERS ON LEGS OR FEET THAT DON'T HEAL LOSS OF HAIR ON THE LEGS REDDISH-BLUE DISCOLORATION OF THE EXTREMITIES **GANGRENE** 

THICKENED, OPAQUE TOENAILS



### PAD global statistics, 2019<sup>3</sup>



COVID-1

COVID-19 patients with diabetes or hypertension are prone to lower limb complications and require therapeutic anti-coagulation<sup>5</sup>

## RISK FACTORS<sup>1,2</sup>



- ✓ Old age
- √ Smoking
- **✓** Atherosclerosis
- **✓** Physical inactivity
- ✓ Obesity
- √ High blood pressure
- ✓ Diabetes
- ✓ High cholesterol

PAD can lead to leg or foot amputation, heart attack or stroke4

Only 25% of patients present with symptoms, the most common of which is intermittent claudication<sup>6</sup>

~20-30% patients with **PAD** have concomitant diabetes mellitus<sup>7</sup>

~6.5 million people aged 40 and older in the US have PAD<sup>1,8</sup>

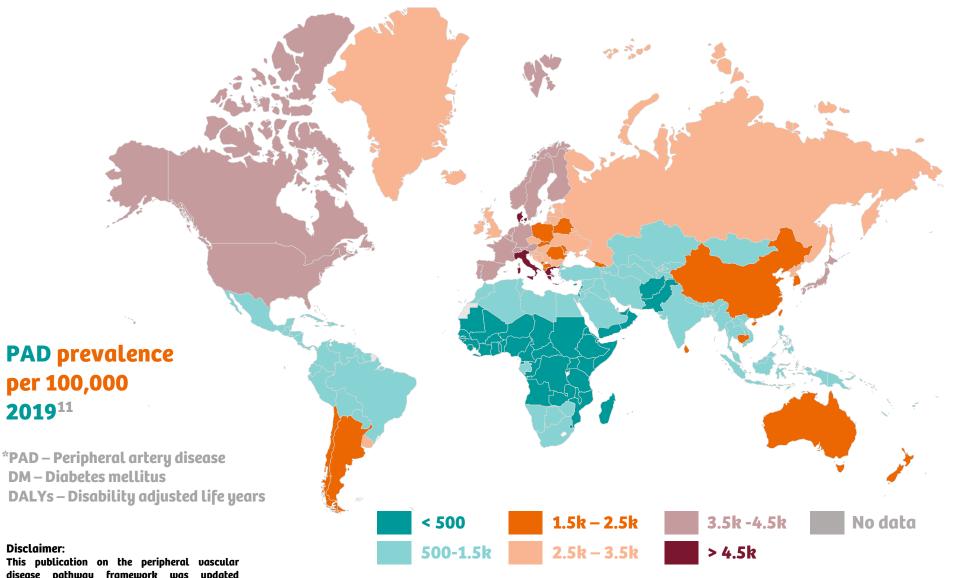
>1 in 6 patients with PAD are readmitted within 30 days post revascularization9



**Cost of care for patients with PAD** and **DM** ranges from

\$84 billion to \$380 billion annually7

The global peripheral vascular devices market size was valued at USD 6,500 million in 2022 and is expected to increase at a CAGR of 7.4% from 2023 to 203010



#### Disclaimer:

disease pathway framework was updated on 27.04.2023. It cannot be taken as a recommendation for the readers, especially not as a guideline for treatment, and it is not a medical document. There is no guarantee for completeness or global correctness, the various pain points, solutions, and statistical data are examples only. Sources are multiple, such as public statistics, expert opinions, open innovation workshops, research, own data and many more (see references).

The products and features mentioned may not be available in all countries and their future availability cannot be guaranteed. Some products mentioned are planned and under development.

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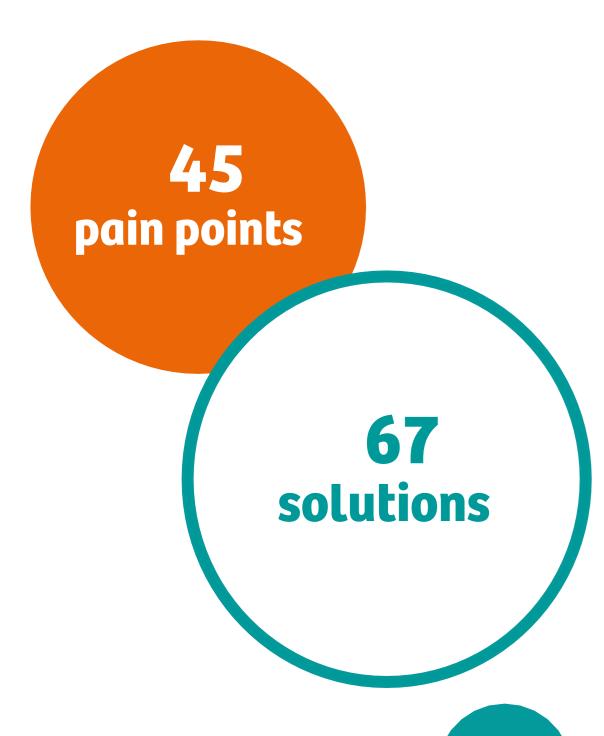
Website: https://www.siemens-healthineers.com/innovation-think-tank

# Disease pathway analysis with pain points and solution examples

research-based scientific hospital workflow experience allowed the identification of pain points and solutions.

These solutions were proposed biosensors, nanorobotics smart wearable technologies.

# **THROUGH THIS CAREPLAN WE HIGHLIGHT DATA FROM A COLLECTION OF**



connected to

different stakeholders

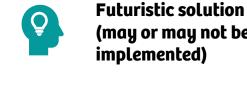
# Solution categories



**Existing in healthcare** 

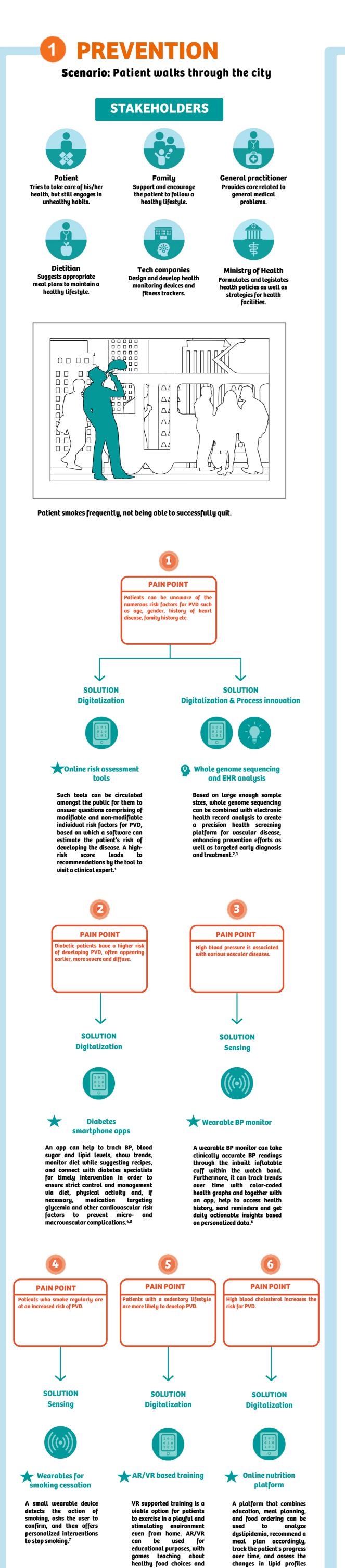


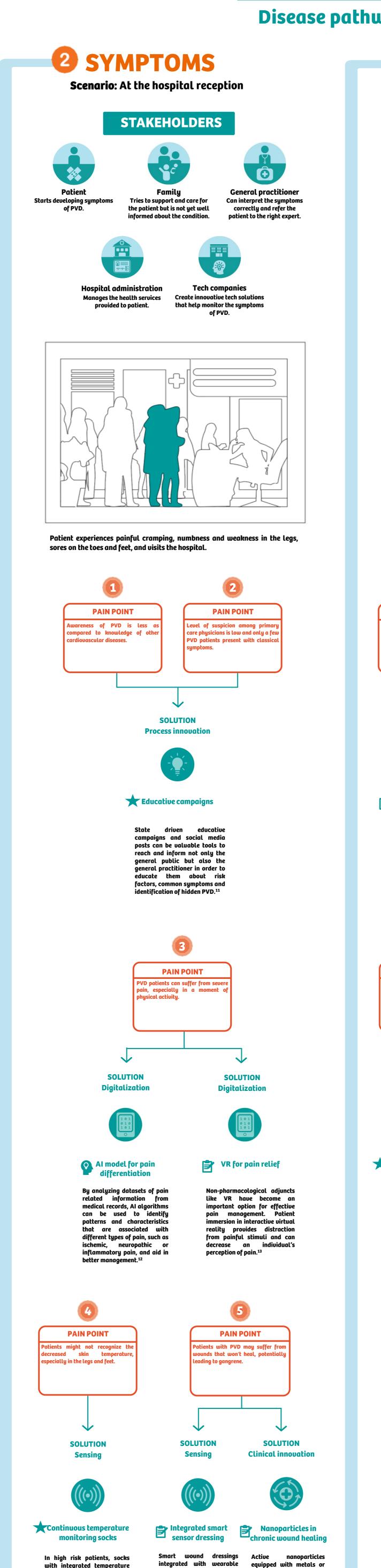
Ongoing research in



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with integrated temperature

measuring sensors can act as

an early warning system for

decreased skin temperature in

the lower limbs, based on

which further investigations

can be conducted.14

among those with

increased lipids.<sup>10</sup>

sensors to monitor the pH ions have antimicrobial

wound site and detect nanoparticle delivery

possible infections can systems enable a

facilitate efficient clinical sustained release of drugs

care non-invasively and in and growth factors,

real time. They can also enhancing wound

and temperature at the benefits,

enable the management of closure.16

distant patients.15

