

VAU.S. Department
of Veterans Affairs

News Release

Office of Public Affairs
Media RelationsWashington, DC 20420
(202) 461-7600
www.va.govFOR IMMEDIATE RELEASE
Jan. 17, 2019

VA continues expansion of integrated network system to enable health care staff to share best practice uses of department's 3D printing capabilities

WASHINGTON — Today the U.S. Department of Veterans Affairs (VA) announced that it continues to expand its national integrated virtual 3D printing network that began January 2017 at VA's [Puget Sound Healthcare System](#), growing it from just three hospitals with 3D printing capabilities in early 2017 to 20 at the close of 2018.

This growing network allows VA health care staff to share ideas, solve problems and pool resources on best practice uses of 3D printing for improving Veterans' care.

Currently, [Veterans Health Administration \(VHA\)](#) innovators across the 20 sites are using 3D printing to solve a wide range of issues, from presurgical planning to manufacturing hand and foot orthotics.

"VA remains at the forefront of innovative work in 3D printing by expanding our expertise across VA," said VA Secretary Robert Wilkie. "Through this growing virtual network, VA continues to help define how 3D printing technology will be used broadly in medicine for the benefit of patients."

At the Puget Sound Healthcare System, prints of model kidneys for patients with renal cancer aid in presurgical planning, allowing surgeons to plan their surgical approach to maximize preservation of normal kidney tissue and avoid disturbing unaffected vessels that surround a tumor. This can save doctors up to two hours per surgery, reduce the time patients are under anesthesia, and increase operating room availability.

Occupational therapists are also using 3D printers to manufacture specialized hand orthotics, to provide same-day fitting and delivery, which offers immediate care and reduces the need for multiple visits. The digital blueprint can then be saved, so a replacement can be printed quickly if the orthotic breaks or is damaged.

VA researchers are working with collaborators to create a bioprinting program that uses 3D printing to fabricate replacement tissues that are customized to an individual patient. This would decrease wait times for tissues and organs, reduce the need for grafting surgeries and enable hospital and health care providers to improve the quality and safety of medical procedures. The group is targeting a competitive three-year timeline to have a bioprinted vascular bone implanted into a patient.

The 3D printing virtual Center of Excellence is part of the VHA Innovation Ecosystem. The Ecosystem includes the [Diffusion of Excellence Initiative](#) and [VHA Innovators Network](#), two programs that aim to identify and scale innovations and best practices across VA by empowering and enabling employees.

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