

# Stanford

---



## Norman Downing

Clinical Assistant Professor, Medicine - Biomedical Informatics Research

### CLINICAL OFFICES

- **Stanford Express Care**

211 Quarry Rd Ste 102

MC 5989

Palo Alto, CA 94304

**Tel** (650) 736-5211

**Fax** (650) 736-5299

### ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

Marta Vitale - Administrative Associate

**Email** msoto2@stanford.edu

### Bio

---

#### BIO

I am faculty in Biomedical Informatics Research at Stanford and board-certified internal medicine and clinical informatics. I split my time between clinical practice, hospital medical informatics and applications of artificial intelligence in healthcare. I work with the Clinical Excellence Research Center – a research group dedicated to reducing the cost of high-quality care – directing the Partnership in AI collaboration with the Stanford Artificial Intelligence Lab. Recognizing that the complexity of medicine has grown beyond the abilities of even the most expert clinician, we focus applications of computer vision to address some of the greatest challenges in healthcare: perfecting intended care for frail patients in settings ranging from the intensive care unit to the home. My work has been featured in the New England Journal of Medicine, Health Affairs, Annals of Internal Medicine, and the Journal of the American Medical Informatics Association on applications of artificial intelligence and health IT to lower the cost of high-quality care.

#### CLINICAL FOCUS

- Internal Medicine
- Clinical Informatics

#### ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Medicine - Biomedical Informatics Research

#### ADMINISTRATIVE APPOINTMENTS

- Medical Informatics Director, Stanford Health Care, (2017- present)
- Program Director, Partnership in AI-assisted Care (PAC, Clinical Effectiveness Research Center (CERC), (2017- present)

#### PROFESSIONAL EDUCATION

- Residency: Stanford University Internal Medicine Residency (2014) CA
- Board Certification: Clinical Informatics, American Board of Preventive Medicine (2017)
- Medical Education: Case Western Reserve School of Medicine (2011) OH
- Fellowship: Stanford Hospitals and Clinics CA

- Board Certification: Internal Medicine, American Board of Internal Medicine (2014)

## Research & Scholarship

---

### CLINICAL TRIALS

- Virtual Hypertension Management Pilot, Recruiting
- Study of an Electronic Health Record-embedded Severe Sepsis Early Warning Alert, Not Recruiting

## Teaching

---

### COURSES

#### 2018-19

- AI-Assisted Care: MED 277 (Aut, Win)

## Publications

---

### PUBLICATIONS

- **Electronic health record-based clinical decision support alert for severe sepsis: a randomised evaluation.** *BMJ quality & safety*  
Downing, N. L., Rolnick, J., Poole, S. F., Hall, E., Wessels, A. J., Heidenreich, P., Shieh, L.  
2019
- **Technology-Enabled Consumer Engagement: Promising Practices At Four Health Care Delivery Organizations.** *Health affairs (Project Hope)*  
Tai-Seale, M., Downing, N. L., Jones, V. G., Milani, R. V., Zhao, B., Clay, B., Sharp, C. D., Chan, A. S., Longhurst, C. A.  
2019; 38 (3): 383–90
- **Improving palliative care with deep learning.** *BMC medical informatics and decision making*  
Avati, A., Jung, K., Harman, S., Downing, L., Ng, A., Shah, N. H.  
2018; 18 (Suppl 4): 122
- **Physician Burnout in the Electronic Health Record Era: Are We Ignoring the Real Cause?** *ANNALS OF INTERNAL MEDICINE*  
Downing, N., Bates, D. W., Longhurst, C. A.  
2018; 169 (1): 50–+
- **Bedside Computer Vision - Moving Artificial Intelligence from Driver Assistance to Patient Safety.** *The New England journal of medicine*  
Yeung, S., Downing, N. L., Fei-Fei, L., Milstein, A.  
2018; 378 (14): 1271–73

5 OF 18