

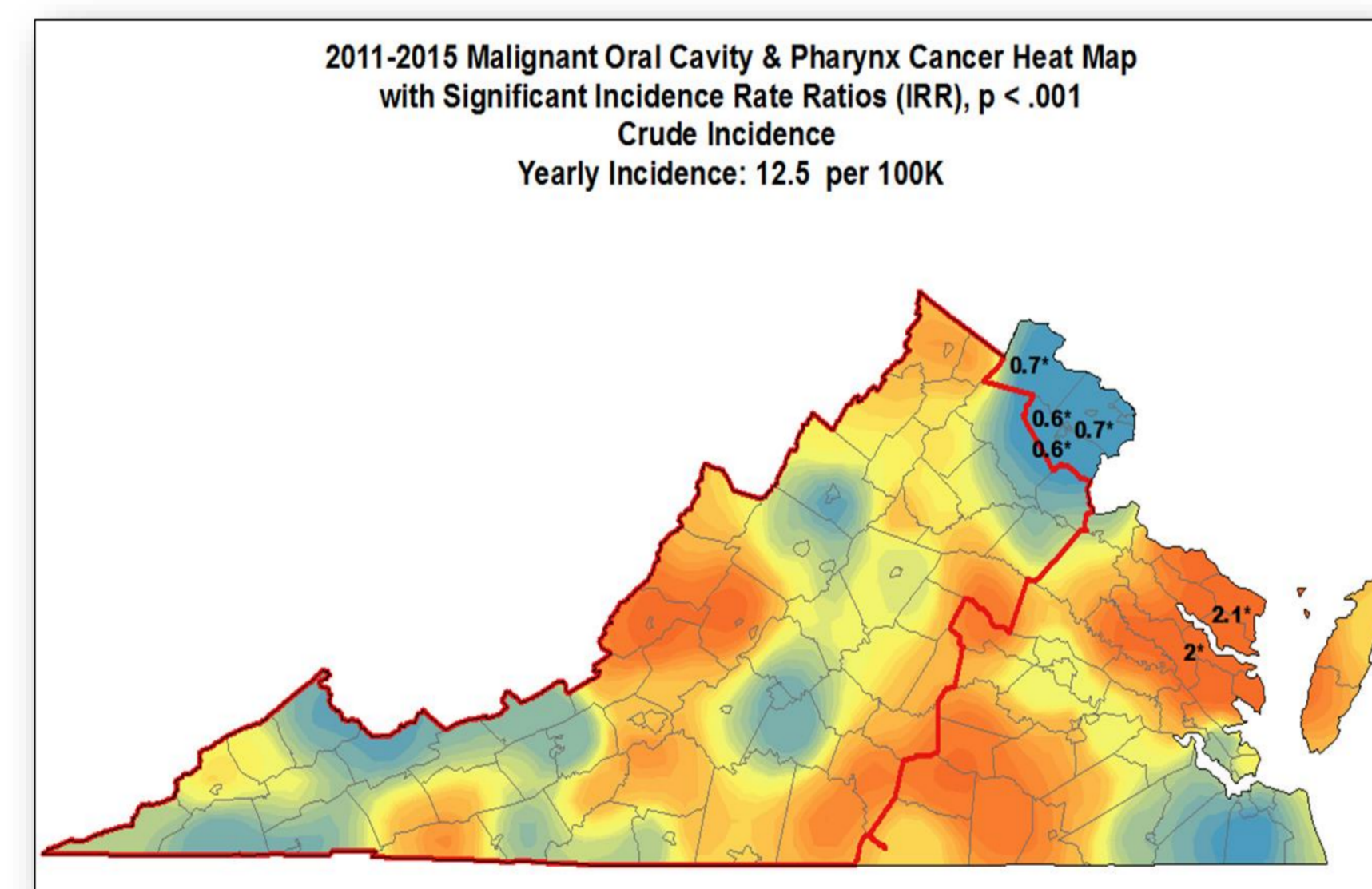
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## BACKGROUND

- In 2018, over 51,000 men and women are projected to be diagnosed with head and neck cancer (HNC) in the United States
  - HNC is defined as cancer of the oral cavity, pharynx, larynx, sinuses, nasal cavity, and salivary glands
- HNC hits hard in rural Virginia.** Data extracted from the Virginia Cancer Registry (See map, below) shows significant variance in HNC incidence rates across the state, with twice the state average rate in many rural counties along the West Virginia border, Southside, and the Eastern Shore.
  - Those living in these less populated rural areas of Virginia are older, have lower literacy, higher tobacco use, and far less access to care.
- HNC affects areas of the body imperative for critical activities such as speech and swallowing;
- Survivors of HNC often suffer depression and anxiety, and are left with deformities related to loss of facial integrity, which can worsen psychosocial outcomes and decrease quality of life.

## TELEMEDICINE-DELIVERED NURSING CARE

- Telemedicine refers to healthcare delivered over video, phone or using other technology.
- Telemedicine videoconferencing** has been shown to deliver superior outcomes to telephone-based care.
  - The provider can visually assess the patient during the interaction in the home situation.
  - Visual assessment and timely evaluation is critical for head and neck cancer patients, many of whom have wounds from facial area surgeries.
- Telemedicine is used in multiple areas of healthcare to reach rural communities.
  - Despite its potential applicability, very few telemedicine interventions have been evaluated for rural cancer survivors.
  - The majority of telemedicine research evaluates feasibility, not patient outcomes.
- The unmet needs of rural head and neck cancer survivors is highly amenable to nursing care, but **no research has evaluated the use of a nursing telemedicine survivorship visit.**
- Because of the complex interplay of limited health literacy and access to care in rural populations, nursing survivorship care delivered via telemedicine needs to be evaluated for improving outcomes in this vulnerable population.

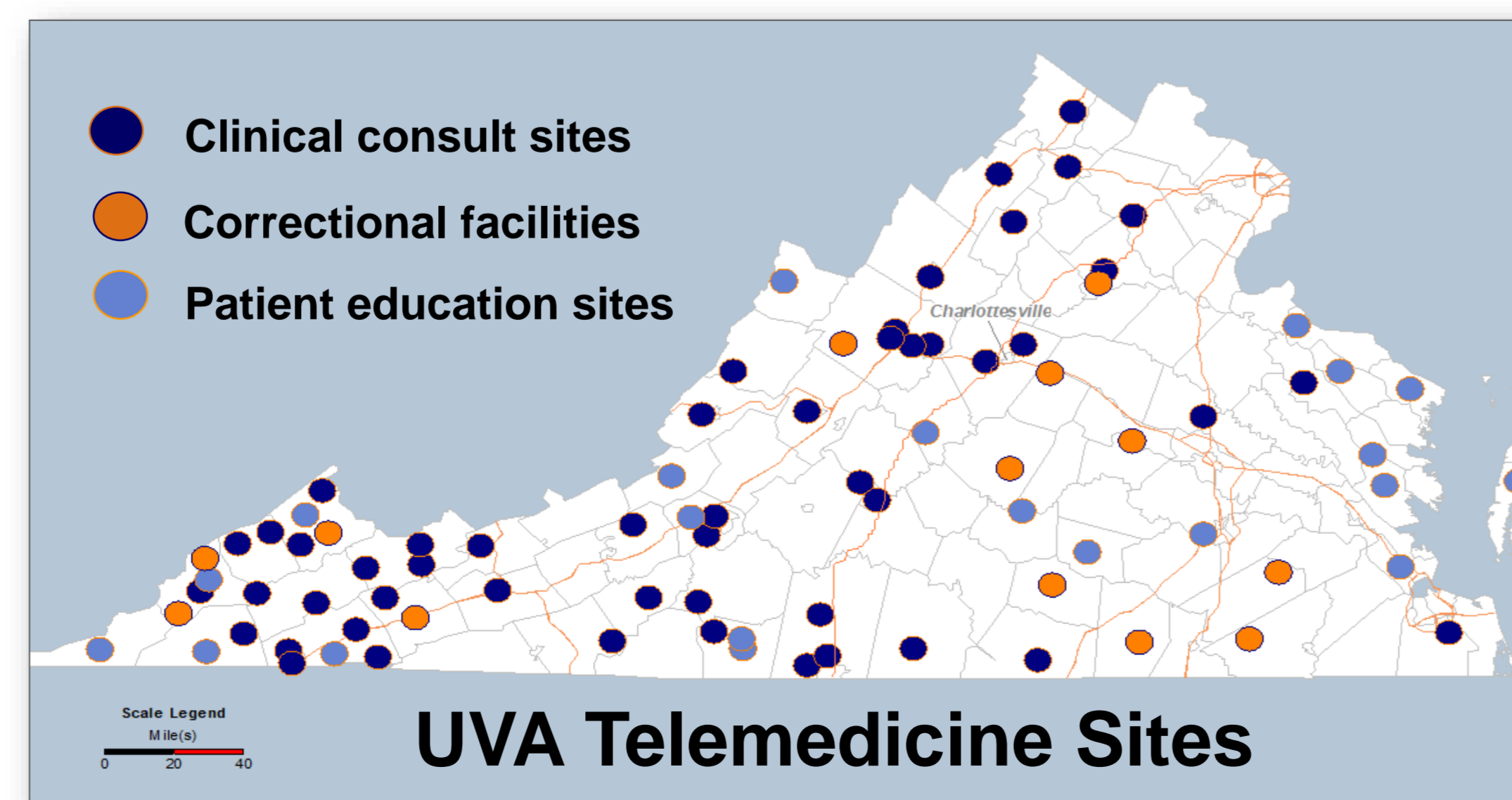


Source: UVA Cancer Control and Population Health Core

## INTERVENTION

*Comprehensive Assistance: Rural Intervention, Nursing, and Guidance (CARING)*

CARING is a telemedicine-delivered nursing visit for cancer survivors delivered several weeks after treatment has been completed. The intervention has three main components: **assessment, education, and referral.**



## ASSESSMENT

- Distress Screening.** National Comprehensive Cancer Network (NCCN) Distress Thermometer (DT) amended for the HNC population
  - The NCCN DT includes a visual scale to rate patients' distress, and a problem checklist that asks the patient to indicate if they have had problems during the past week with practical concerns such as finances and transportation, physical concerns such as pain and fatigue, emotional concerns such as anxiety and worry.
  - The DT has been amended to include HNC-specific areas of distress: jaw swelling, hearing loss, and speech difficulties.
- Wound Assessment.** Most HNC cancer survivors will have had surgery within the past 3-4 months prior to the visit. The nurse visually assesses the wound for surgical site infection, wound healing, and dehiscence.
  - Wound assessment, diagnosis and treatment using telemedicine is well established.
  - The nurse will provide an assessment of the wound and report concerns back to the clinical team.
- Prioritization.** The nurse guides a discussion with the patient using therapeutic communication to identify specific issues that are contributing to the areas of distress.
  - Nurses employ therapeutic communication with patients, not to cure illness, but to demonstrate empathy so that the patients feel comfortable being honest and open with the nurse.
  - In cases of multiple areas of distress, the nurse and the patient will prioritize the top three areas of distress to address during the visit, and identify those in need of further intervention.

## EDUCATION

- Surveillance.** HNC are at increased risk of recurrent HNC. Nearly one-quarter of deaths within 10 years are attributable to HNC.
  - The nurse reviews and reinforces surveillance information from the SCP using teach-back methods to ensure understanding.
- Health Promotion.** Long-term survivors of HNC are at a high risk for death from multiple non-HNC causes. Of the 41% of three-year HNC survivors who die within ten years of diagnosis, half of those deaths are attributable to either a non-HNC second primary site or cardiovascular disease.
  - The nurse educates the patient on broad health promotion strategies as laid out in the patient's SCP, including maintenance of a healthy weight and physical activity. Specific to HNC, the nurse evaluates educational needs around maintaining a sufficient weight, avoidance of tobacco products, and maintenance of regular dental care.

## REFERRAL

- Unmet Needs.** Need for referral will stem from the information gathered in the Assessment and Education portions of the telemedicine visit.
  - Following the telemedicine visit, the nurse communicates with the care coordinator of the HNC practice to determine which items require referral and where best to direct referrals.
  - The nurse follows-up with the patient via telephone three months following the telemedicine visit and re-administers the DT to assess any remaining unmet needs, and communicates these back to the HNC care team.

## NEXT STEPS

- Phase 1 (current)**
  - The study team is evaluating feasibility of the intervention with 10 rural HNC survivors.
    - Use of home-telemedicine vs. site-based telemedicine
    - Number and type of identified distress needs
    - Use of videoconferencing as a visual assessment tool
- As patients go through the intervention, the study team is evaluating needed adjustments to the protocol
- Phase 2 (planned)**
  - The study team will amend the protocol as directed by Phase 1 evaluation
  - Measurements will be conducted to evaluate changes in quality of life and unmet survivorship needs