INTRODUCTION
To improve patient and clinician safety during the COVID-19 pandemic, primary care practices shifted from in-person to telehealth visits (telephone and video) beginning in March 2020.1 As practices seek to re-balance their mix of in-person and telehealth visits, they might benefit from empirical evidence about which reasons for visits produce the best patient experiences for in-person vs telehealth modalities.2,3 This study aims to provide information about adult patient experiences of, and satisfaction with, in-person, video, and telephone visits in primary care.

METHODS
Between November 2020 and February 2021, we conducted a cross-sectional survey of 48,161 adults who were insured by Blue Cross Blue Shield of Massachusetts and who had had a primary care visit in 2020.

The survey, based on items from the CAHPS Clinician and Group Visit Survey 4.0 (beta) and 3.0 surveys,4 was designed to compare patient experiences of primary care across visit modes (i.e., in-person, video, and telephone) and by patient-reported reason for visit (new concern, routine chronic condition, chronic condition flare-up, behavioral health, preventive care, follow-up for hospital/ED visit, follow-up for tests, or other). We fielded the survey in two mailed waves on November 9, 2020, and December 7, 2020, and collected responses through February 8, 2021. At the respondent level, we coded item responses to a 0-to-100 scale, with higher scores reflecting better patient experiences, and then we averaged them to calculate state-level item scores. We analyzed state-level data using t tests and one-way ANOVA tests to assess differences in patient experiences by patient characteristics, and visit mode and visit satisfaction, stratified by visit reason.

RESULTS
A total of 6139 surveys were returned (13% response rate). The majority of respondents were white (82%), non-Hispanic (96%), and in excellent/very good general health (58%); had internet access (96%) and reliable internet (77%); and were comfortable using their devices (71%). Respondents were older than the non-respondents (mean age 55.6 vs. 46.6 years), and there were only trivial differences between respondents and non-respondents on gender, education, poverty, race, ethnicity, and primary language.

Experience Differences by Patient Characteristics
For most items, older (> 45 years), male, and white patients reported significantly better experiences compared to younger (≤ 45 years), female, and non-white patients, respectively.

Experience Differences by Visit Mode
For most items, patients reported significantly better experiences for in-person visits than with video or telephone visits (Table 1).

Experience Differences by Visit Mode and Visit Reason
Patients rated in-person visits highest and telephone visits lowest for new concerns, routine chronic condition, and preventive care (Table 2). In contrast, patients rated in-person and video visits similarly for behavioral health and follow-up visits after hospitalization/ED visit, with both visit modalities having higher ratings than telephone visits.

DISCUSSION
Our findings suggest that from a patient perspective, in-person primary care visits are the gold standard. However, for behavioral health and follow-up visits post hospitalization/ED visit, where patients reported the same quality of experience for in-person and video visits, video visits may offer patients increased access and convenience without compromising patient experience. These findings, which are supported by others,5,6 may explain greater use of telehealth for behavioral health than for other health conditions1 and provide evidence for the U.S.
Department of Health and Human Services’ endorsement of telehealth for follow-up care.

The study was conducted within a commercially insured patient population, which might limit generalizability to other populations. The survey response rate was low, and the respondents were older than the non-respondents. The low response rate might be related to the timing of the survey fielding, which occurred during the 2020 winter holiday season.

In conclusion, patients may be most amenable to primary care telehealth visits for behavioral health and follow-up visits post hospitalization/ED, if the visits are video visits.

| Table 1 Comparison of Survey Item Scores Organized by Domain and Visit Mode |
|---------------------------------------------------------------|
| **Domain** | **Items** | **Adult (5842)** | **In-person (3777)** | **Video (1475)** | **Telephone (590)** |
| Communication | Provider explained things in a way that is easy to understand. | 97.2* | 96.4* | 94.4* |
| | Provider listened carefully to you. | 97.1* | 96.3* | 95.1* |
| | Provider showed respect for what you had to say. | 97.7* | 96.6* | 96.1* |
| | You were able to communicate your concerns to provider. | 95.8* | 94.8* | 93.8* |
| Integration of care | Office followed up with test results. | 95.6* | 93.6* | 93.6* |
| Knowledge of patient | Provider knows you as a person, including values and beliefs. | 95.5* | 94.4* | 93.4* |
| | Provider has the medical information they needed about you. | 96.3* | 96.6* | 86.1* |
| Office staff | Office staff was as helpful as you thought they should be. | 95.1* | 91.2* | 89.1* |
| | Office staff treated you with courtesy and respect. | 97.4* | 96.0* | 94.2* |
| Overall rating | Overall rating of visit | 91.9* | 87.2* | 85.4* |

*Denotes statistically significant differences compared to the average score for the item. Scores are on a 100 scale, with higher scores reflecting better patient experiences

| Table 2 Comparison of Visit Mode Mean Ratings by Visit Reason |
|---------------------------------------------------------------|
| **Visit rating**** | **New concern** | **Routine chronic condition** | **Chronic condition, flare-up** | **Behavioral health** | **Preventive care** | **Follow-up hospital or ED** | **Follow-up tests** | **Other** |
| **In-person visit, rating** | 90.1* | 94.3* | 88.4 | 95.0* | 92.6* | 90.4* | 91.5 | 90.7 |
| **Video visit, rating** | 87.2* | 89.0* | 87.3 | 94.5* | 85.3* | 91.6* | 89.4 | 87.0 |
| **Phone visit, rating** | 85.1* | 87.7* | 82.1 | 86.0* | 83.8* | 83.4* | 88.6 | 88.0 |
| **P value** | 0.001 | < 0.001 | 0.19 | 0.06 | < 0.001 | 0.07 | 0.16 | 0.10 |

*Denotes statistically significant differences between all visit modes

**Denotes statistically significant differences between telephone and other visit modes

**Ratings are on a 100 scale, with higher scores denoting higher ratings
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Declarations:

Conflict of Interest: The authors declare that they have no conflicts of interest to disclose.

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