



Community-Based Case Investigation and Contact-Tracing:

*Enhancing Strategies To Battle COVID-19 Resurgence
In San Joaquin Valley Communities*

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Fundamental Points To Keep In Mind

ABOUT COVID-19

- “Hot spots” --resurgence of COVID-19 until vaccine is developed and distributed (at least through 2021). Uncertainties re extent, location, timing
- Case investigation/contact tracing is an essential effort to suppress exponential spread--especially after “opening up”
- Epidemiologists’ modeling shows speed and thoroughness of contact-tracing are crucial (Eggo et. al Lancet Glob. Health 5March, 2020)
- Dynamics of COVID-19 transmission suggest that spread within crowded HH’s is a major component in San Joaquin Valley
- % of serious cases increases with age but risks are still significant for working-age population

ABOUT THE SAN JOAQUIN VALLEY

- SJV immigrant communities deeply concerned about misuse of personal information--very low trust in government
- Ethnic, language, and cultural diversity, make many “mixed status” households particularly distrustful of strangers
- Strong motivation for low-income wage-earners to keep on working due to limited access to financial assistance. Especially those who are undocumented and ineligible for CARES Act assistance and UI.
- Limited awareness of asymptomatic COVID-19, infectiousness of pre-symptomatic cases, consequences of illness

Key Issues Covered

- ❖ San Joaquin Valley and the Dynamics of COVID-19 Spread
- ❖ COVID-19 Hotspots: Focus on Outlying FW Towns
- ❖ Risk of FW COVID-19 infection becoming serious
- ❖ Why Community-Based Contact-Tracing Is Urgently Needed
- ❖ Our Vision of Community-Based Contact-Tracing
- ❖ Key Challenges: Developing Local Consortia and Enhancing the Model
- ❖ Long-Term Implications and Policy Issues

Focus on San Joaquin Valley Latino Immigrants: A Large, Vulnerable Population

- 900,000 foreign-born in SJV, about 630,000 are Latino, and about 600,000 working-age (18+)
- Mostly *Mexicano/as*, >10% indigenous origin, >42% undocumented
- Long-term settlers: LPR's, naturalized citizens average 46-48 years old. Many continue working even as they age (inadequate Social Security benefits due to seasonal work) Undocumented: 31 years old.
- And about two out of three FW's lack legal status. They average 42 years of age. Groundbreaking California COVID-19 "safety net"--but, for undocumented no access to UI
- Exclusion of undocumented, mixed-status families from CARES Act assistance, widespread concerns about potential DHS use of personal information
- About half of Mexican and Salvadoran immigrants only attended elementary school, many are limited in English, HH's of older often have limited Internet access.
- Stress and insecurity— farmworkers in "essential workforce" but uneven availability of work, few alternative job options, other immigrant workers also especially vulnerable (e.g. health care support workers, warehouse workers)

COVID-19 Transmission in Farmworker Communities

- $R_0=3$ (basic reproductive rate: # infected by each COVID-19+ person). But R_t (real-time reproductive rate) varies w/ societal context— can be/higher or lower than R_0 . Mean time from a person being infected to infecting a 2nd person is about 6 days.
- 3 domains of transmission: 1/3 in community, 1/3 in workplace and school, 1/3 in HH's. California eliminated transmission in schools and non-essential businesses by closing them and reduced community transmission, but didn't help transmission in "essential business" workplaces or crowded HHs. Now (almost) back to "business as usual".
- WKF estimates within-household transmission is about 2.5 times higher in FW HH's than in the average U.S. HH. No adequate information on transmission in agricultural workplaces (varies--probably higher than many workplaces, lower than in health care)
- R_t in immigrant and FW communities probably much higher than the average US or California community (perhaps 4?). Thus, faster spread, possibility of serious "hot spots" of re-emergence.

Latino Immigrant and FW Risk of COVID-19 Infection: At Home and in the Workplace

Housing Conditions

- Extremely crowded housing and big households (some multi-generational, others “complex”)
- 5-10% live in “unconventional” housing unit—e.g. converted garage, backyard trailer, hygiene typically difficult even if not crowded

Working in an “essential” business”

- 25% of FW’s go to work w/ *raitero*, shared car, farm labor bus
- Variation in agricultural employers’ commitment to a safe workplace
- Inadequate guidelines from OSHA and from CDC

CDC's Guidance to "Self-Isolate" At Home Is Infeasible

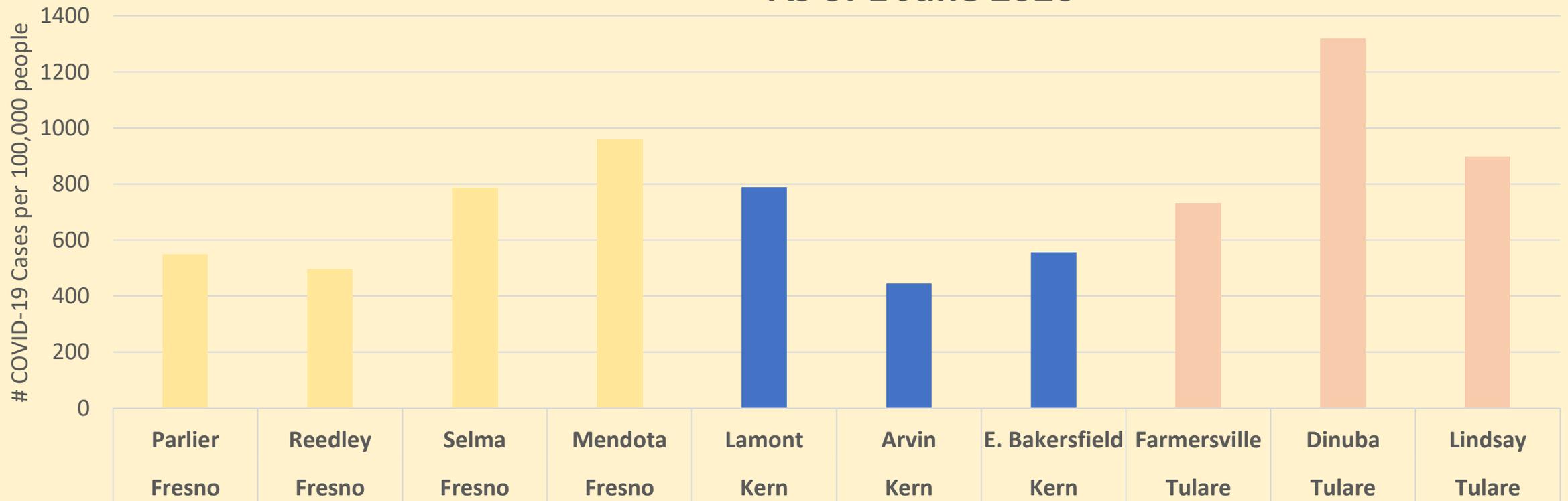
Crowded Farmworker Housing			
FW and Immigrant Communities	Immigrant/FW HH's	Type of Housing	Crowding (>1 person/room)
Arvin, CA 82% adults are FW <i>(Kissam, Garcia, Doignon 2003)</i>	5.3 persons/HH 40% of HH >5 persons	Apartment or duplex: 20% Mobile home: 14% Single-family home: 62% Other (e.g. garage): 2%	>65%
San Joaquin Valley Latino 1st and 2nd Generation Immigrants <i>(SJVCRP 2019)</i>	4.5 persons/HH 50% of HH>5 persons ~20% in complex HHs	Varies extensively, crowded apartments in urban areas, mobile homes and single-family homes in rural	Estimated >60%
Pajaro-Salinas Valley Farmworker Housing Survey <i>(Mines, 2017)</i>	7.3 persons/HH 53% in complex HHs	Apartment. or duplex: 30% Mobile home: 6% Single-family home: 58% Other (e.g. garage): 6%	93% 2.3 /room 5.2/bathroom 16% w/ no bedroom

Workplace Safety: Official Guidance Too Vague and Permissive, Low Level of Oversight

- CDC guidance belatedly improved (June 1, 2020) but still bureaucratic—loopholes inherent in conditional language: “if feasible”, “to the extent possible”.
- CDC and Cal/OSHA both fail to address limitations of temperature screening (although more than half of COVID-19+ present w/out fever—NEJM, Physicians’ Weekly) leading to false sense of confidence.
- Does not include CDC estimates that 40% of transmission is from pre-symptomatic and about 35%-50% of COVID-19+ cases are asymptomatic. Also-inadequate attention to home-→workplace spread, unconventional housing arrangements
- Few on-site inspections by state or federal agencies, little encouragement for ongoing peer/collaborative learning networks among employers and FLC’s, recommendations for workplace safety plans but no criteria for assessing them.
- Unclear if public health agencies have capacity to rapidly or reliably discern outbreaks and/or provide practical guidance to employers to enhance safety

Cumulative Confirmed Cases: Despite Uncertainties, One Indicator of COVID-19 Patterns in San Joaquin Valley

COVID-19 Hot Spots in the San Joaquin Valley
As of 1 June 2020



Takeaways Re Prevalence and Patterns of COVID-19 in the San Joaquin Valley (June 1, 2020)

- Benchmarks: UCSF/Unidos En Salud in S.F. Mission District and Partners in Health/Coalition for Immokalee Workers pilots had intensive messaging outreach and easy access to PCR testing. So they secured fairly representative samples showing that prevalence was much higher than evident in previous county-level data (1,400 cases/100K in Mission, 2,200 cases/100K in Immokalee).
- San Joaquin Valley appears better off than urban LA--but the uncertainties re representativeness of testing data are cause for concern.
- Some towns have cumulative levels of confirmed COVID-19 cases 150% to 500% higher than the average for the county they are in. But other communities similar to apparent “hot spot” ones have few or no cases. Lack of access to PCR testing? Or good luck? Further improvements in access to testing are needed to know.
- Inconsistent tabulation of COVID-19 on county “dashboards” --Stanislaus Co. and Kern Co. excellent. Other issues--e.g. Kings Co, about 2/3 of cases at Avenal State Prison
- Promising model: UC Berkeley Public Health plans for Salinas Valley “triple” testing of 5,000 farmworkers (PCR nasal swab, saliva sample, antibody testing) are attractive, especially due to linkage with FQHC for rapid medical advice and industry/county collaboration to provide temporary housing.

Farmworkers With COVID-19: Socioeconomic and Biological Factors Affecting Outcomes

- 40-50% of FW's lack health insurance, some have lost it due to disruptions in employment due to market conditions
- Many working-age farmworkers not eligible for full-scope Medi-Cal although 32% of spouses are and most children covered by Medi-Cal.
- 30% have not visited a health provider during the past 2 years
- Males: 70%
- Average age: 42 years
- BMI >30: Men 29% Women 38%
- High BP: Men 27% Women 4%

* *FW data from National Agricultural Worker Survey (FY 2016) and California Agricultural Worker Health Survey*

Why These COVID-19 Risk Factors Matter for FW's

- Not all cases are mild. Most serious for the elderly but younger persons still at risk: from 15-30% of cases among working-age (18-64) are moderate or serious
 - Common FW health conditions (obesity, diabetes, high BP) linked to worse outcomes. About 85% of hospitalized patients have underlying condition.
 - Men more likely to have serious complications and die from COVID-19 than women but fewer male FWs have an established relationship with a health care provider
 - Securing a COVID-19 test has often required a referral from a health care provider or online registration--lower digital literacy/Internet access makes it hard to find a testing site
 - Worries about cost of testing and treatment for those who lack insurance coverage deter seeking definitive diagnosis and contribute to delay in seeking medical advice and care
 - ***But earlier care may improve outcomes:*** monitoring oxygenation, supplemental oxygen, anti-coagulants, earlier use of anti-virals. Monitoring of recovery in case of delayed cytokine storm
- ❖ *Estimates of hospitalization are % of reported cases by age from CDC MMWR on March 18, 2020. Association between underlying conditions and hospitalization by age from CDC MMWR on April 8, 2020.*

Case Investigation/Contact-Tracing: What Needs To Be Done

- ***Case investigation***: Contact COVID-19+ individuals and find out who they've been in close contact with (analytic thinking needed to identify/prioritize "close" contacts)
- ***Contact Tracing***: Contact people the infected person has had close contact with. Help their contacts effectively self-quarantine and self-isolate as needed
- Moving very fast is crucial. Infected individuals' maximum infectiousness is from 2-3 days before they have symptoms to 7 days after. Half of cases are asymptomatic. 40% of transmission before infected individuals recognize symptoms (pre-symptomatic).
- Thoroughness/accuracy is crucial. Must identify 90% of contacts to successfully suppress exponential spread. Each new case not quarantined/isolated infects 3 or more others.
- Persuasive Communication. Contact-tracers need to explain to contacts that they should presume they're infected until they get test results, persuade them to self-quarantine
- Isolation/Quarantine--Rapidly secure temporary lodging, food support, assure daily check-ins and advice during course of illness (and recovery).

Our Vision of Community-Based Case Investigation And Contact-Tracing To Reach Immigrants and FWs

- County public health nurturing hubs for community consortia and grassroots networks for case investigation/contact tracing-- Not just “going it alone” and asking for help from others. Bona fide collaborative partnership. Not just with health-oriented programs, also a broad spectrum of service providers/outreach workers!
- Integrate testing, case investigation and contact-tracing to community health centers for “one stop shopping”. A crucial step in shortening pathway from symptom recognition → seeking advice → testing → diagnosis → case investigation → contact-tracing → isolation or quarantine → safe recovery
- Organizational diversity to reach linguistically/culturally diverse groups in San Joaquin Valley *mestizos*, indigenous Mexican workers, Salvadorans, Punjabis, Hmong
- Geographic diversity of partners to effectively reach outlying areas—e.g. Huron, Lindsay, Porterville, Firebaugh, Kettleman City, Kerman

Confianza: Build On Existing Relationships To Enhance Case Investigation/Contact-Tracing Impact

- Community Health Centers (FQHC's) as core collaborators—build on *promotor/as'* ongoing efforts in addressing range of issues. Establish FQHCs as a locus for testing coupled with advice (not just drive-by)--a shortcut to initiating case investigation and contact tracing.
- Migrant Head Start, First 5, local K-12 schools—not just explicitly health-oriented but close, ongoing relationships with families with children, trust, experience advising on family dynamics.
- Immigrant/farmworker legal service advisors—strong relationships with undocumented and mixed-status families, experience helping navigate bureaucratic processes—e.g. CVIIC, CRLAF, CRLA, KIND
- Formal and non-formal community organizations--e.g. CBDIO, hometown associations, youth programs, Lideres Campesinas, sports leagues, crewleaders, corner stores, churches

Enhance Case Investigation/Contact Tracing Efficacy: From Mapping To Guaranteed Intervention

- Standard information & referral systems do not function rapidly or reliably enough to reap the full benefit from contact-tracing. For low-income HH's with crowded living conditions, immediate self-isolation or self-quarantine crucial!
- Enhance case investigator/contact tracer preparation beyond 20-hour online technical curriculum: preparation for challenges in rapidly reaching cases and contacts and in persuading them to self-isolate or quarantine.
- Secure Consortium/network commitment to provide whatever support needed: temporary lodging, food and economic, information on legal rights under CA law (e.g. sick leave, WC, family leave). This is critical to improve efficacy--especially for asymptomatic contacts identified as COVID-19+ through PCR testing who may not be motivated to self-isolate.
- Case management/counseling/advice Address difficulties in family transitions to isolation or quarantine--parents and children, married couples, multi-generational HH's. Advice for family members to effectively monitor patient progress. Assure followup to identify newly-emerging problems during recovery

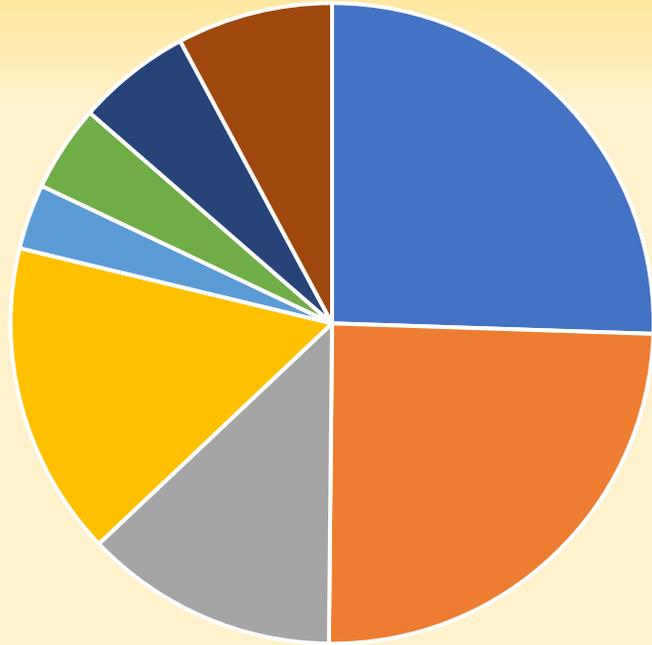
Integrate Health Outreach With Contact-Tracing

- Proactive community messaging to diverse populations--not just CDC “basic information”: Strengthen understanding of how transmission happens, how contact-tracing can reduce prevalence, information about help available, awareness of possible consequences of COVID-19, including sequelae
- Transform testing and contact-tracing from “brief encounters” into opportunities to engage in dialogue to build awareness re COVID-19 transmission e.g. problem-solving re hygiene, awareness re asymptomatic cases, clarification of summary CDC guidance on symptom recognition
- Integrate conversations re COVID-19 seriousness and when to seek care into discussions with cases and contacts—unpredictability of complications, value of early intervention in some cases, possibility of sequelae

Messengers, Navigators, Resource Mobilizers For Local COVID-19 Response Networks

- Immigrant Resilience Fund grassroots partners- Already engaged as intermediaries helping families confront both economic and health-related consequences of the pandemic.
- Messaging Partners—Can transform community perspectives to build awareness of rationale for contact-tracing, improved awareness re viral transmission, best practices re self-care and seeking care—e.g. in San Joaquin Valley, Radio Bilingue, Univision, Center for New Americans, in Oxnard, Radio Indigena
- Business/Ag Industry Partners—e.g. ag employers and associations such as CFCLA, Strawberry Commission, willing to commit to systematic efforts to improve workplace safety or pitch in with other help (Grower-Shipper Assn. help with temporary lodging for self-isolation/quarantine)
- Local government--Key role in securing appropriate lodging for self-isolation or self-quarantine for those who need it, supplementing other sources of assistance

Case Investigation/Contact-Tracing: Core Workforce Needed



■ Kern ■ Kings ■ Tulare
■ Fresno ■ Madera ■ Merced
■ Stanislaus ■ San Joaquin

- Estimated Total=1,583 based on new cases
- WKF Estimate using **Resolve To Save Lives(RSL)** estimator=1,751
- Estimate HIGHLY sensitive to input re # new cases/day--rapid increase if delay in outbreak control or decrease if R_t decreased
- RSL does not include suggested enhancements: integrated health education/promotion, case managers to assure support for isolation or quarantine. Additional 25%.....
- **RSL** calculator allows refining assumption based on experience--crucial for SJV and farmworkers
- Assuming COVID-19 prevalence among Latino HH's at 1.3 times higher than overall population, at least 2 out of 5 contact-tracers would need to have language/cultural competency to effectively reach and engage Latino immigrants

*Based on Estimate by Natl. Assn. of County and City Health Officials
Data: June 8, 2020*

Long-Term Implications....

- Re-frame COVID-19 pandemic as a “community” problem, not just a siloed “public health” problem. Focus on outcomes--not on activities, process....incorporate community oversight as quality assurance tool...Relevant/reliable and actionable indicators (Friedan Op-Ed 6-10)
- Mainstream institutional actors still fail to adequately understand the contributions that social and cultural capital can make. Opportunities to build siloed bureaucracies’ appreciation that “network strategy” are more effective than command-and-control
- Configure community-based case-tracing to serve as launch pad for workers to move onward and upward in public health careers...include self-directed learning and team collaboration for problem-solving into day-to-day efforts.
- COVID-19 is a paradigm case of an illness where social determinants of health play the leading role in transmission and outcomes. Pivot from information delivery toward “popular education”/community conversation as optimal mode for impacting:
Knowledge→Beliefs→Attitudes→Aspirations→Behavior
- Immigrant advocacy organizations and allies must not simply call for equity and justice but also work with all stakeholders to design optimal strategies for combatting the pandemic

And Finally, Advance Policy Discussion For Next Phase

- Question truncated CDC practical guidance to the public--With adequate hospital capacity resulting from “bending the curve” it may be desirable to revise guidance to encourage earlier intervention to improve outcomes
- Question CDC ethnocentric assumptions that every household has a primary health care provider, health insurance coverage, and ample room to isolate at home.
- Question the austerity of COVID-19 messaging to the public using abstract, bureaucratic language (Draft of CDC guidelines for “opening up” was considered “too specific” and subsequently revised to be adequately vague)
- Seek greater transparency and legislative/regulatory provisions to assure accountability in federal, state, county, municipality response to COVID-19. Perhaps state and local oversight bodies with ample community representation

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Several WKF working papers on COVID-19-related issues are published on our website

<http://www.wkfamilyfund.org>